3. HydroView Operations

This chapter explains each operation within HydroView and is designed to assist the user in selecting appropriate functions for monitoring a hydrometeorological situation. It includes a presentation of all pertinent HydroView windows, a HydroView Operations Guide and a HydroView Functional Guide (i.e., a How Do I ? Guide). The windows presented in this chapter are from the operation of the HydroView component of the WHFS. Each window is annotated. Many windows present detailed information for a specific river forecast point, river data point, reservoir station or other hydrometeorological data collection station; therefore a station must be selected prior to their use. Station selection is accomplished through the **Station Selection** option of the **Background** menu in the HydroView root window or by *Clicking* on the desired station in the Geographical Display. Where appropriate, a source window(s) (e.g., the window used to access the featured window) is provided in the background as a reference.

HydroView provides the forecaster with a set of displays for monitoring the hydrometeorological situation. The Geographic Display, along with its various data overlays, is a useful tool for the forecaster. The Geographic Display is controlled through the **Point Display Control** and **Areal Display Control** options of the **LiveData** menu. The forecaster should become familiar with the many features available through these options.

Some screens in HydroView reference various data codes for some parameters. These codes are as referenced in ***S**tandard **H**ydrometeorological **E**xchange **F**ormat*, *Weather Service Hydrology Handbook No. 1*.

Flash Flood Monitoring

The Flash Flood Monitoring (FFM) function in the WHFS assists the forecaster with monitoring short-fused flood events (e.g., flash floods). The primary focus of the FFM function is to compare precipitation data with Flash Flood Guidance (FFG) computed and issued to the WFO by the River Forecast Center(s). Both the precipitation data and the FFG data are available separately in HydroView but the FFM couples the two data sets and allows optimal use of all data by the forecaster.

The precipitation data sets that are monitored include observed and forecast precipitation for various durations. The data can be analyzed at different spatial resolutions, including gridded and areal modes, where the areas are either counties, NWS zones, or hydrologic basins. When comparing the precipitation data with FFG data, the comparisons can be performed by computing precipitation as either a percentage of FFG or as a difference from the FFG. The Flashs Flood Monitoring and Prediction (FFMP) component of WHFS is being migrated into the SCAN

functionality within D2D. Additional documentation regarding the FFMP component of SCAN can be found at: <*http://www.nws.noaa.gov/tdl/scan/ffmpUGframeset.html*>.

User Interface

The FFM function is resident in HydroView and is accessed through the **LiveData** menu by *Clicking* on **Areal Display Control**. Data are provide on the Geographical Display. The forecaster can also summarize the FFM features including precipitation monitoring in tabular form by using the Show Summary button on the Areal Display Control window. The appropriate windows are illustrated later in this chapter.

The user can select the data mode, the precipitation data source, and the spatial resolution as follows. Once the mode and precipitation data source are selected, a scrolled list of available products is loaded. The products include one-hour products generated by the Stage I and Stage II processes as well as multi-hour products as scheduled by the forecaster.

The available data modes:

- Precipitation data
- FFG data
- Compare precipitation and FFG data

Precipitation data sources:

- Stage I radar estimates
- Stage II gage-radar estimates
- Stage II gage-only estimates
- QPF

Spatial resolution options:

- Grid
- Basin
- County
- NWS Zone

Troubleshooting HydroView

Most errors associated with the use of HydroView are displayed in a pop-up window or through an error dialog shown on the screen. Generally, the pop-up window states the nature of the error (e.g., a date entered in an improper format). The HydroView application is designed to continue once the error is corrected.

Getting Started

Method One

1) From the workstation D2D screen, locate the mouse pointer on a dead area (no windows displayed) and single click the right mouse button. The **System Control Menu** will be displayed.

2) Click left mouse button on **Hydro Apps**, the **Hydrologic Applications Menu** will be displayed.

3) Click left mouse button on **HydroView** in the **Hydrologic Applications Menu**, the **Main Panel (mp)** window (Figure 6) will be displayed.

4) Double click the left mouse button on **HydroView**, the **HydroView Root Window** will be displayed.

Method Two

1) From the D2D display, click on **Surface** on the Menu Bar.

2) Click left mouse button on **Hydro Apps**, a menu will be displayed.

3) Click left mouse button on **HydroView**, the **Main Panel (mp)** window (Figure 6) will be displayed.

4) Double click the left mouse button on **HydroView**, the **HydroView Root Window** will be displayed.

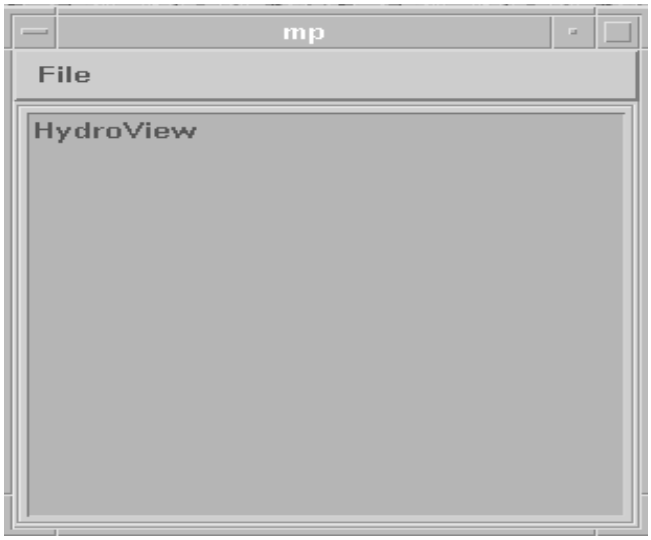


Figure 6. HydroView Main Panel Window

HydroView Windows

The following pages present the various windows used in the operation of HydroView. A list of these windows is provided below.

HydroView Windows

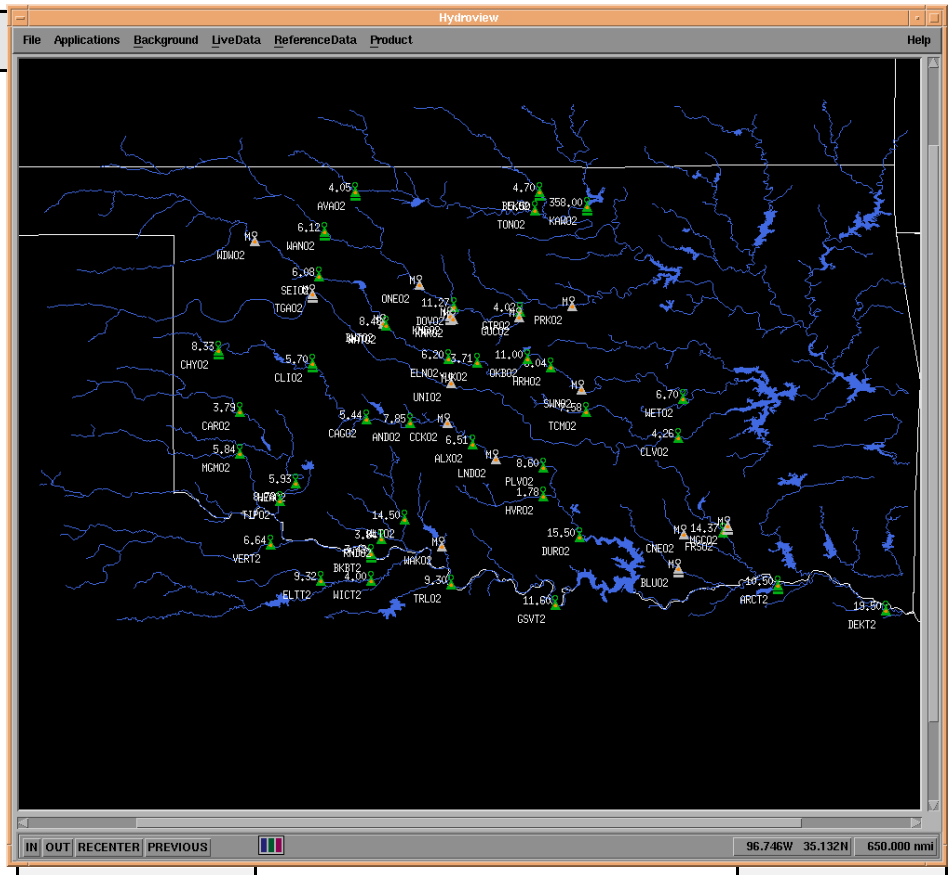
Window	Use	Page
HydroView Root Window	Starting point to access all operations within HydroView	3-7
Areal Viewer Base Window	Adjust Geographical Display using magnification and centering functions	3-10
Areal Viewer Window (Scale Options)	Example of a National View using a Flat Projection	3-11
Areal Viewer Window (Projection Options)	Example of a National View using the Lambert Azimuthal Equal Area Projection	3-12
Station Selection Window	Identify a specific station for further data evaluations	3-14
Background Selection Window	Menu of options of background information available for display	3-15
Point Display Control Window	Display forecast point data on the Geographic Display	3-17
Areal Display Control Window	Display gridded data on Geographic Display	3-18
Areal Display Control Window - Flash Flood Monitoring Function	Examples of Precipitation and Precipitation and Flash Flood Guidance Comparison Displays	3-19
Areal Data Window (Desired Product Settings)	Modify the Available Product Settings on the Areal Data Display Control Window	3-20
Areal Data Window (Precip-FFG Comparison Summary)	Review tabular display of various observed precipitation and flash flood guidance comparisons to evaluate flash flood threats	3-21
Time Series Control Window	Initiate either graphic or tabular time series display(s) for a selected station or predefined time series group	3-22
Graphical Time Series Display Window	Display a graph(s) of the requested time series observations and forecast data for the selected station or predefined time series group	3-23

HydroView Windows

HydroView Windows

HydroView Root Window - Starting point to access all operations within HydroView, use the geographic display to monitor hydrologic events

Menu Bar



Click to:
- Zoom in/out
- Recenter display
- Return to previous display size/center

Cursor Lat/Lon

Display Size

Notes:

River stations with current data available have a green (normal), yellow (action level) or red (flood) icon. Stations with missing data have a grey icon. **S**elect a station for displays in LiveData, ReferenceData, and Product menus.

Station can be selected by a single *Click* on station icon or by using the Select a Station option from the Background menu.

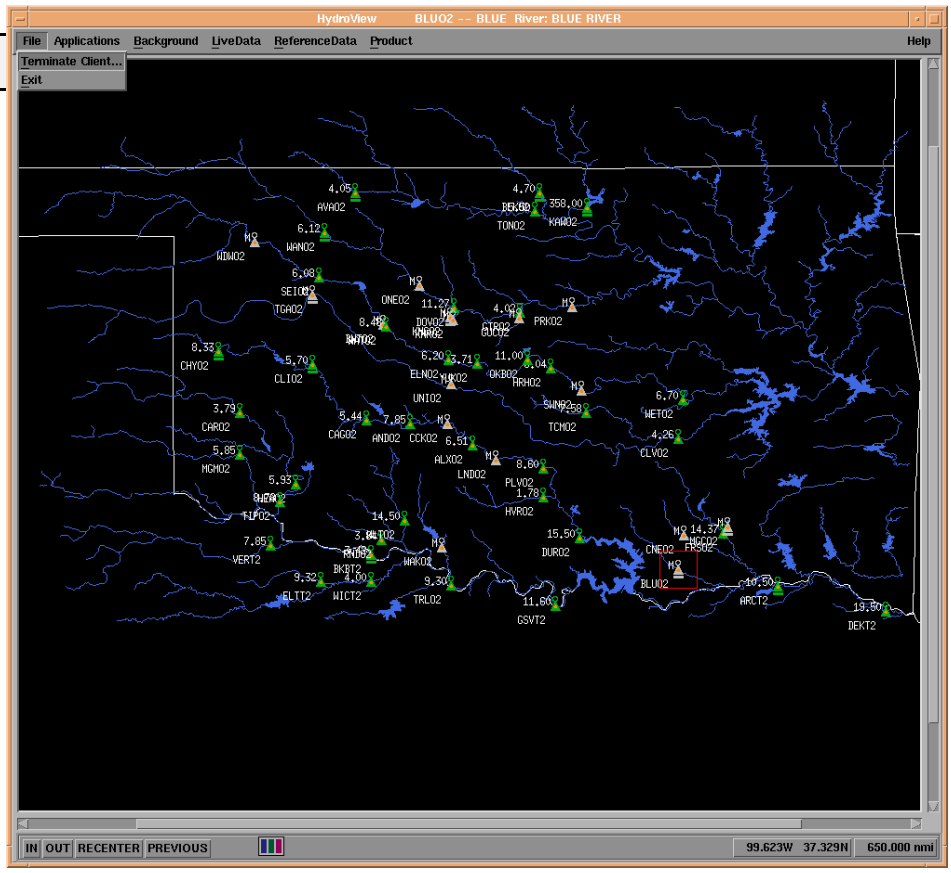
Current station selected appears in a RED box on the geographic display.

Double *Clicking* on a station icon will display the Time Series Control Window. (See pp. 5-22 through 5-24 for information regarding use of the time series display screens. Detailed information regarding the WHFS Time Series Function is contained in Appendix B.)

To RECENTER, *Click* RECENTER button, place cursor at desired location and *Click* again.

Root Window (File selected from the Menu Bar) - Use this selection to exit from HydroView.

Click on File



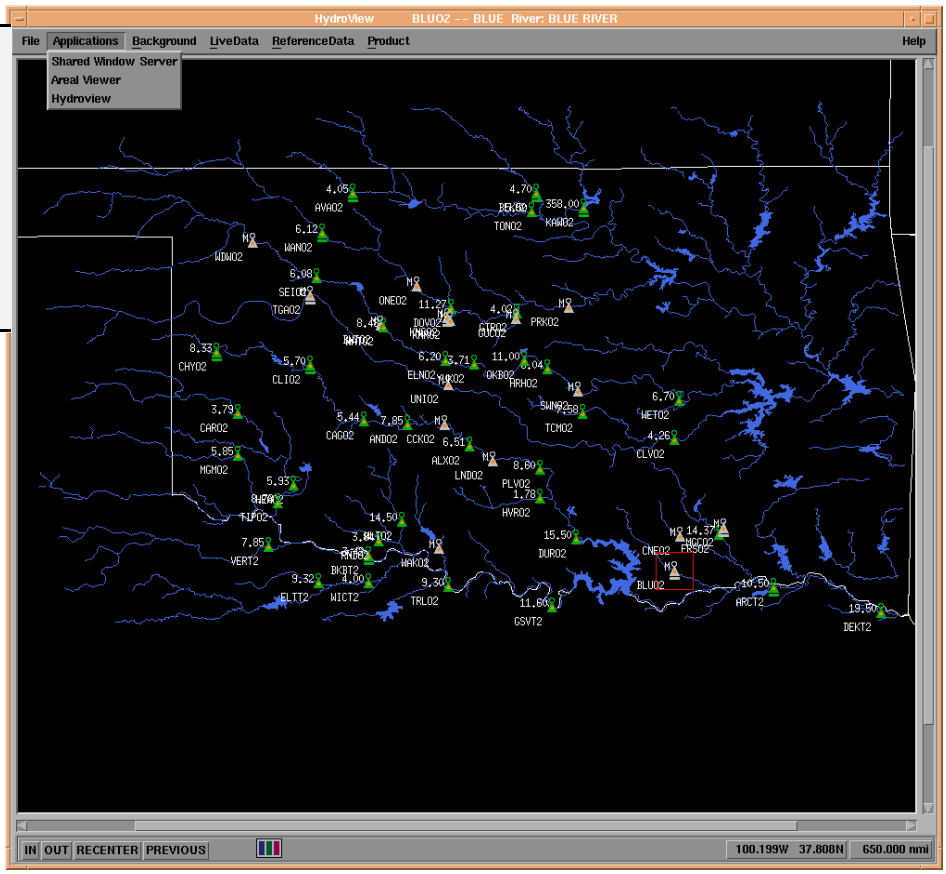
Access this selection from the **Root Window** by *Clicking* on **File**.

Notes: **Terminate Client is NOT RECOMMENDED** as it will terminate the HydroView application without closing the display. If this occurs, exit and then restart the application.

Root Window (Applications selected from the Menu Bar) - Use this selection to run Shared Window Server, Areal Viewer, or to return to HydroView.

Use Areal Viewer to magnify a selected area on the Geographic Display. To return to original display size, use In, Out or Previous buttons.

Use Hydroview to return to the HydroView display from Shared Window Server or Areal Viewer.

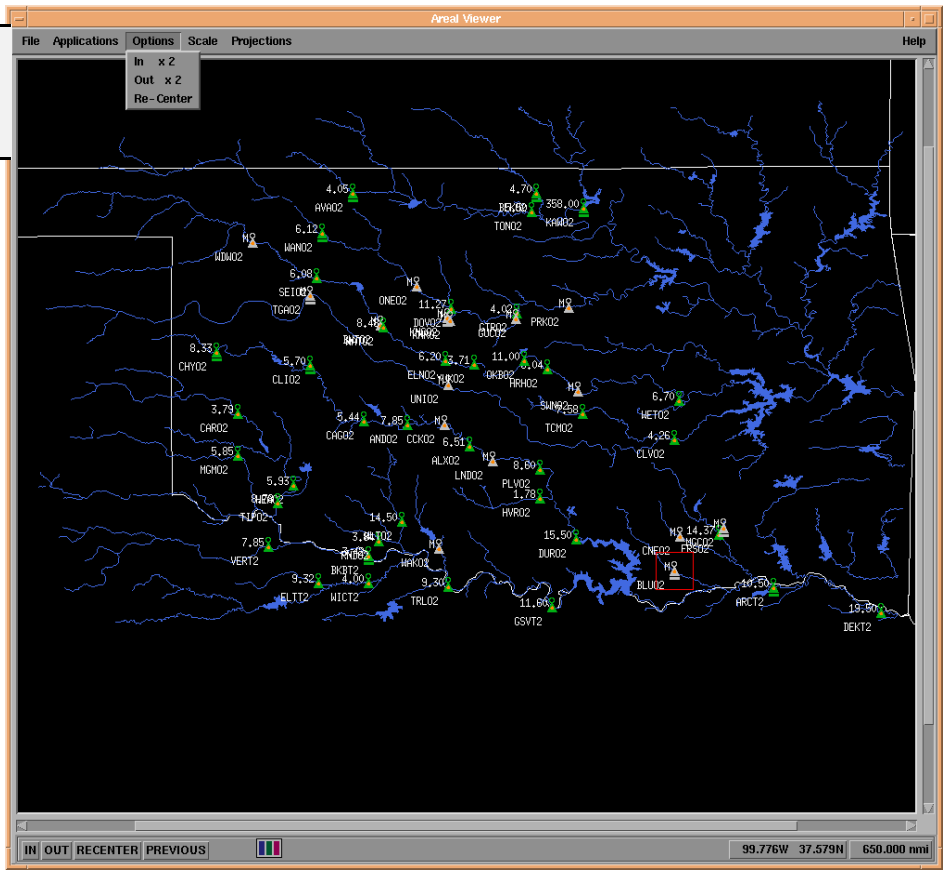


Access this selection from the **Root Window** by *Clicking* on **Applications**.

Notes: The use of the **Shared Window Server** client is NOT RECOMMENDED as it may lock up the HydroView display. If this occurs, exit and then restart the application.

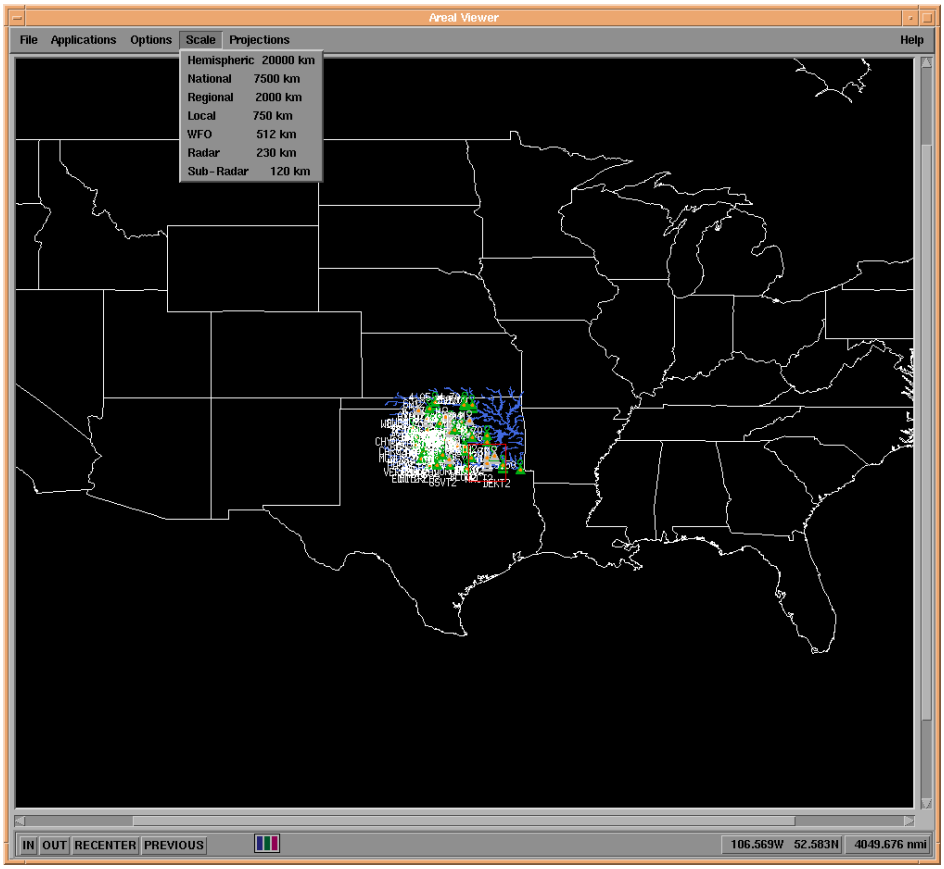
Areal Viewer Base Window - Use this selection to adjust the Geographical Display.

Use Areal Viewer Options to magnify or re-center a selected area on the Geographic Display.



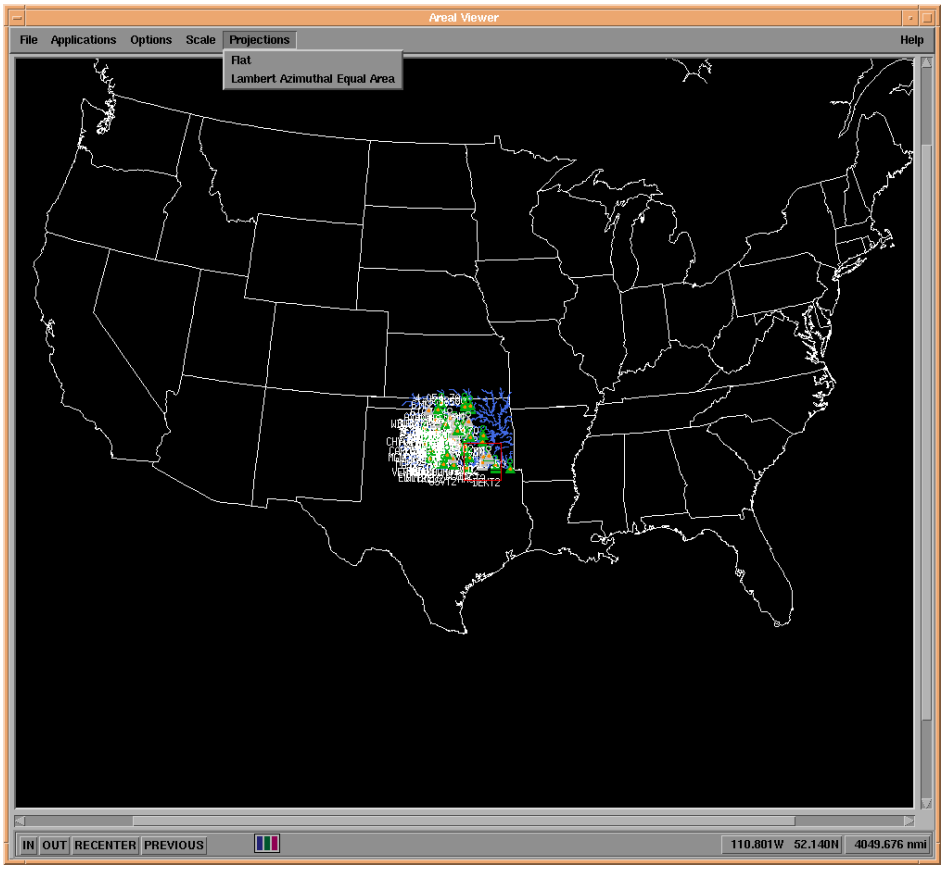
Access this selection from the **Root Window** by *Clicking* on **Applications**, then on **Areal Viewer**.

Areal Viewer Window - Sample screen showing Scale options. National View is displayed using a Flat Projection.



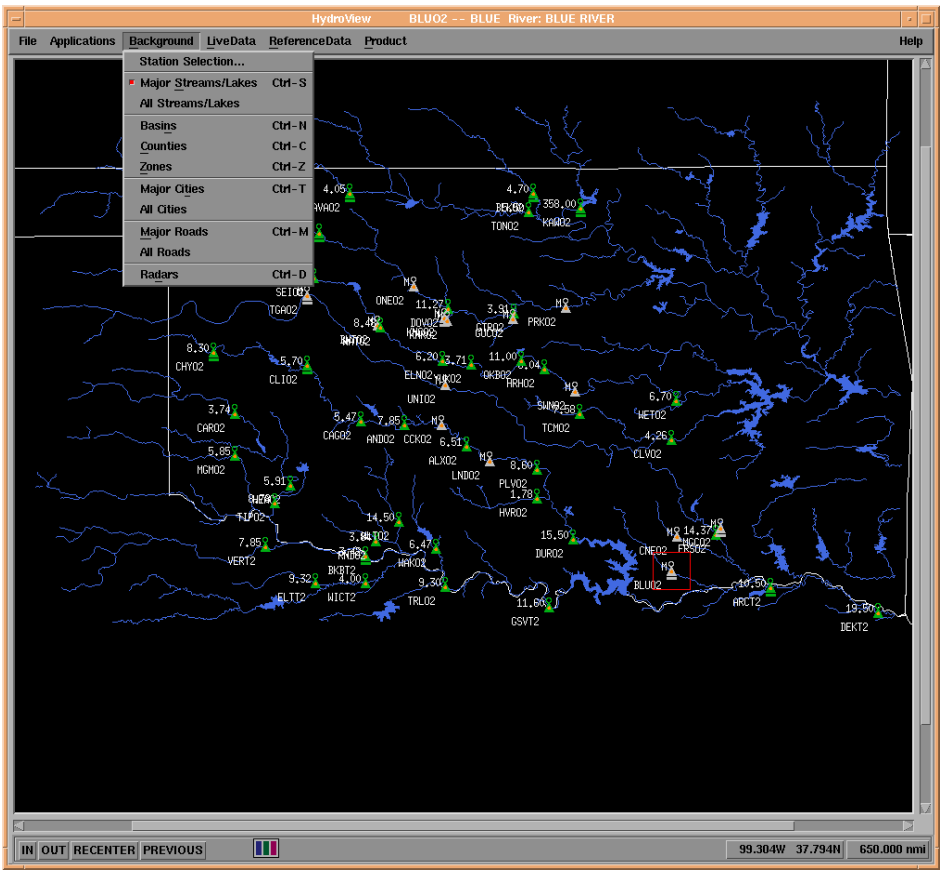
Access this selection from the **Root Window** by *Clicking* on **Applications**, then on **Areal Viewer**.

Areal Viewer Window - Sample screen showing Projection options. National View is displayed using a Lambert Azimuthal Equal Area Projection.



Access this selection from the **Root Window** by *Clicking* on **Applications**, then on **Areal Viewer**.

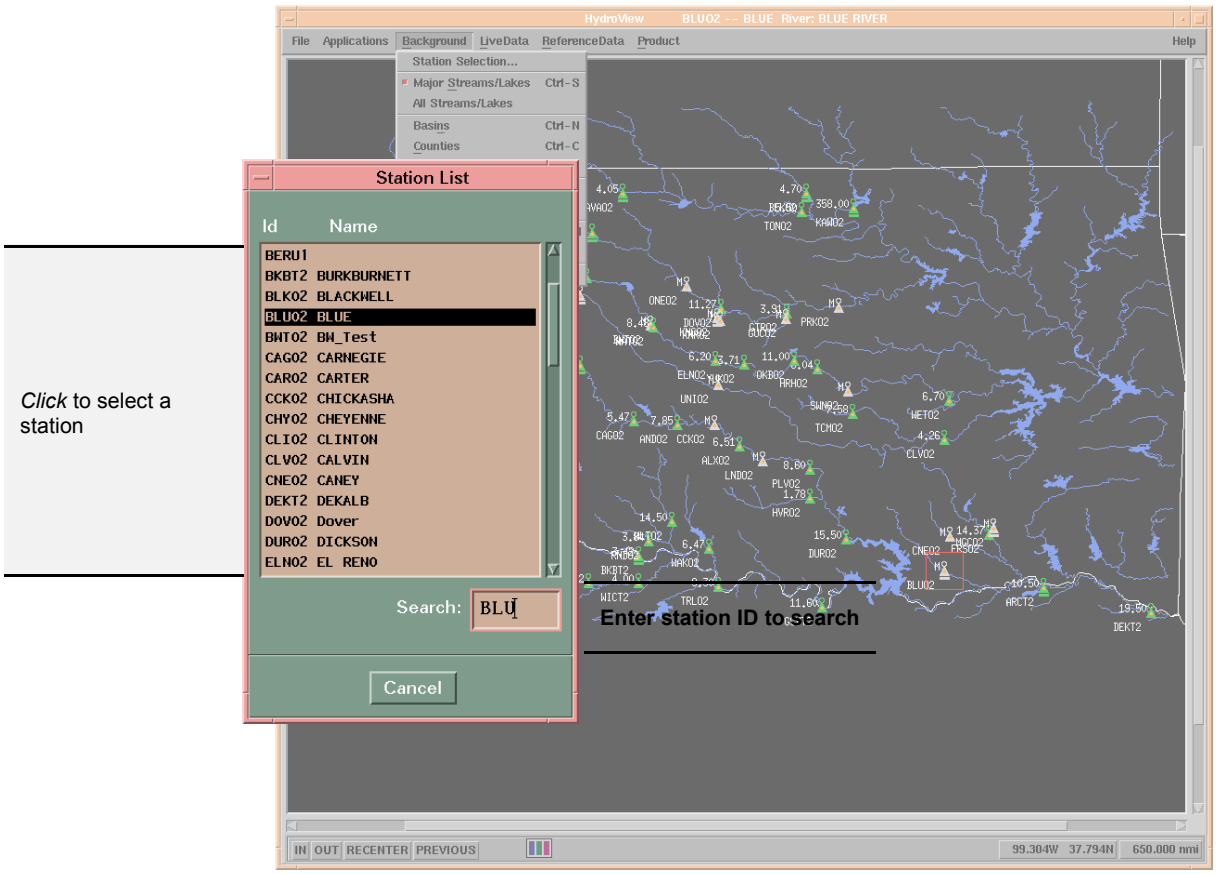
Root Window (Background selected from the Menu Bar) - Use this selection to select a specific station or to vary the background on the **Client Window** Geographic Display.



Access this selection from the **Root Window** by *Clicking* on **Background**.

Notes: **A**ny one background or groups of backgrounds can be selected.
A station may be selected using the Select Station option.

Station Selection Window - Use this selection to identify a specific station for further data evaluations (e.g., in Live Data, Reference Data, and Products).

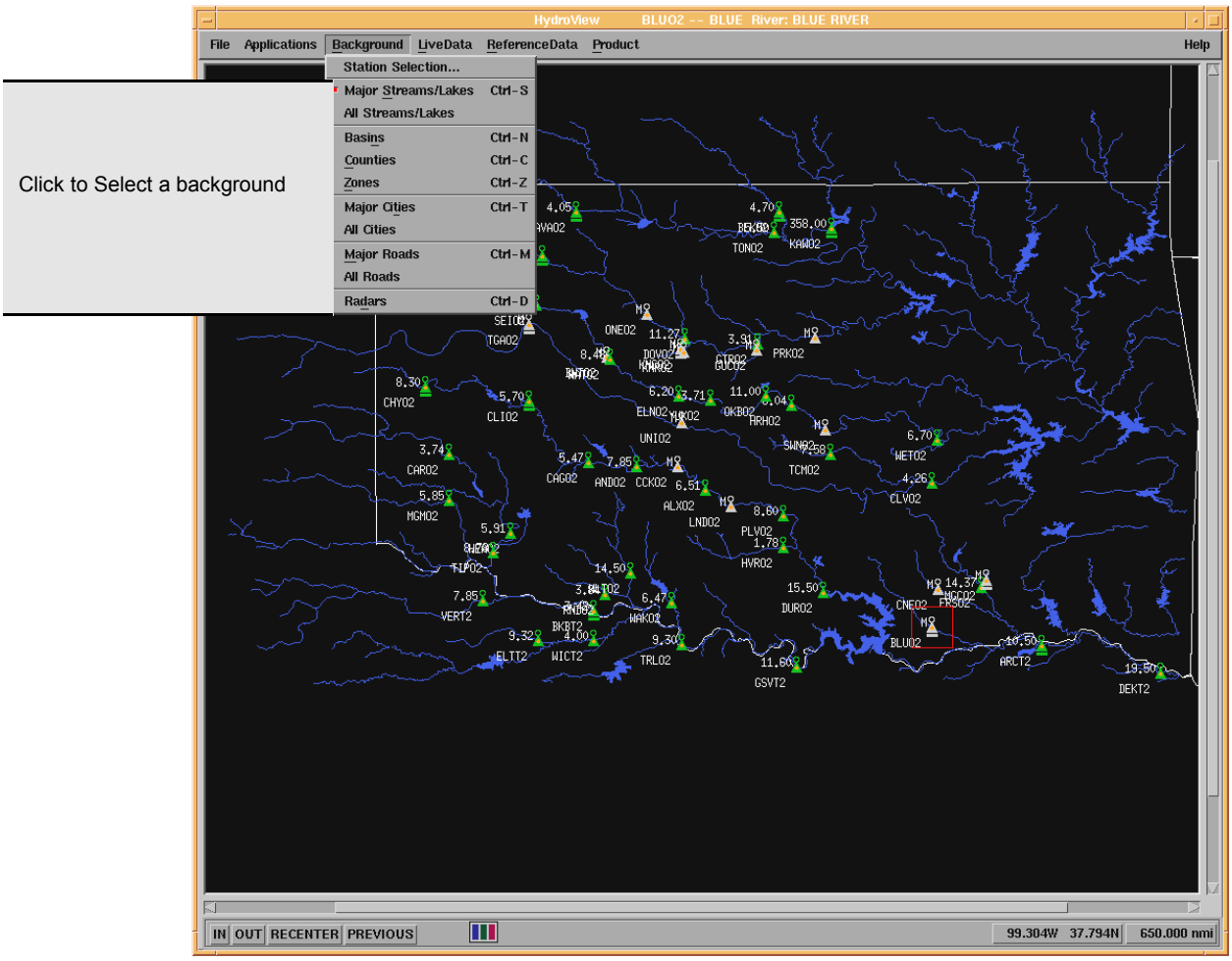


Access this selection from the **Root Window** by *Clicking* on **Background**, then on **Station Selection**.

Notes: **O**nly a Station ID can be entered in the Search box

Background Selection Window - Use these menu options to vary the background on the **Client Window** Geographic Display.

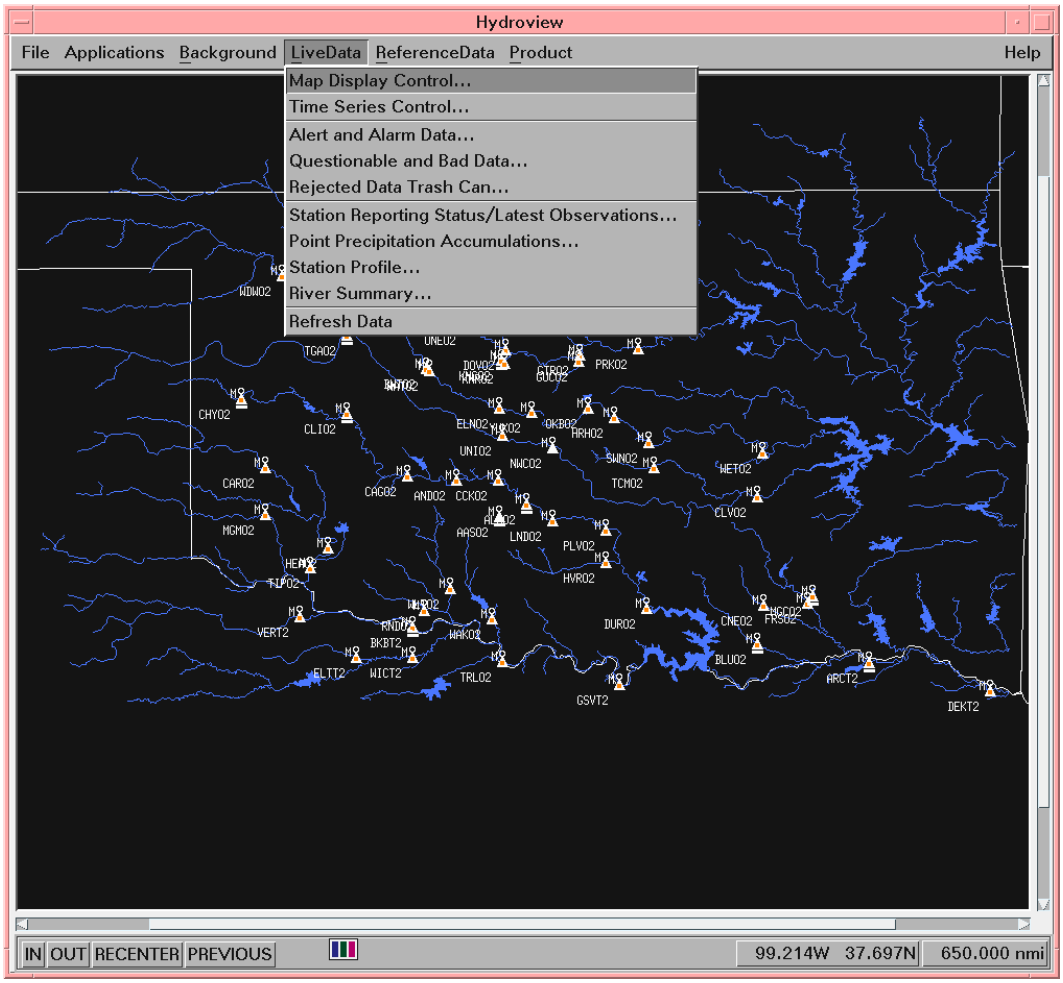
Click to Select a background



Access this selection from the **Root Window** by *Clicking* on **Background**.

Notes: **A**ny one background or groups of backgrounds can be selected.
A station may be selected using the Select Station option.

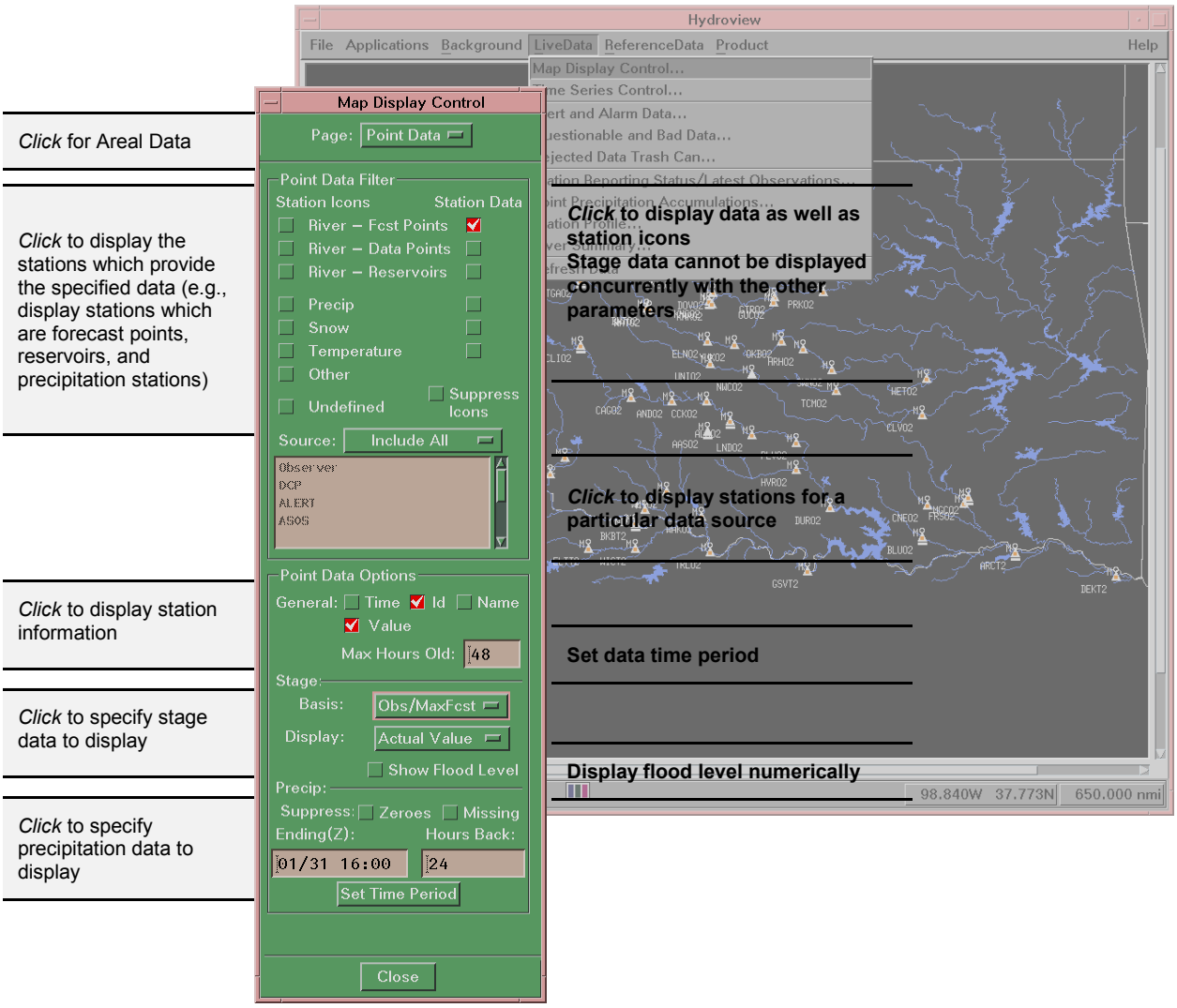
Root Window (Live Data selected from the Menu Bar) - Use this selection to display data and information for the previously selected station.



Access this selection from the **Root Window** by *Clicking* on **LiveData.**

Notes: **R**ealtime data can be displayed for a selected station in several different formats.

Point Display Control Window - Use this selection to display observed/forecast data on the **Root Window** Geographic Display.



Access this selection from the **Root Window** by *Clicking* on **LiveData**, then on **Map Display Control**. (**Page: Point Data** is the default **Page:** option.)

Notes:

Point Data Options can be used to filter the information that will be displayed with each icon. The time displayed will coincide with the data value displayed. The data value displayed will be the most recent available value in the selected time period (use Max Hours Old to select time period).

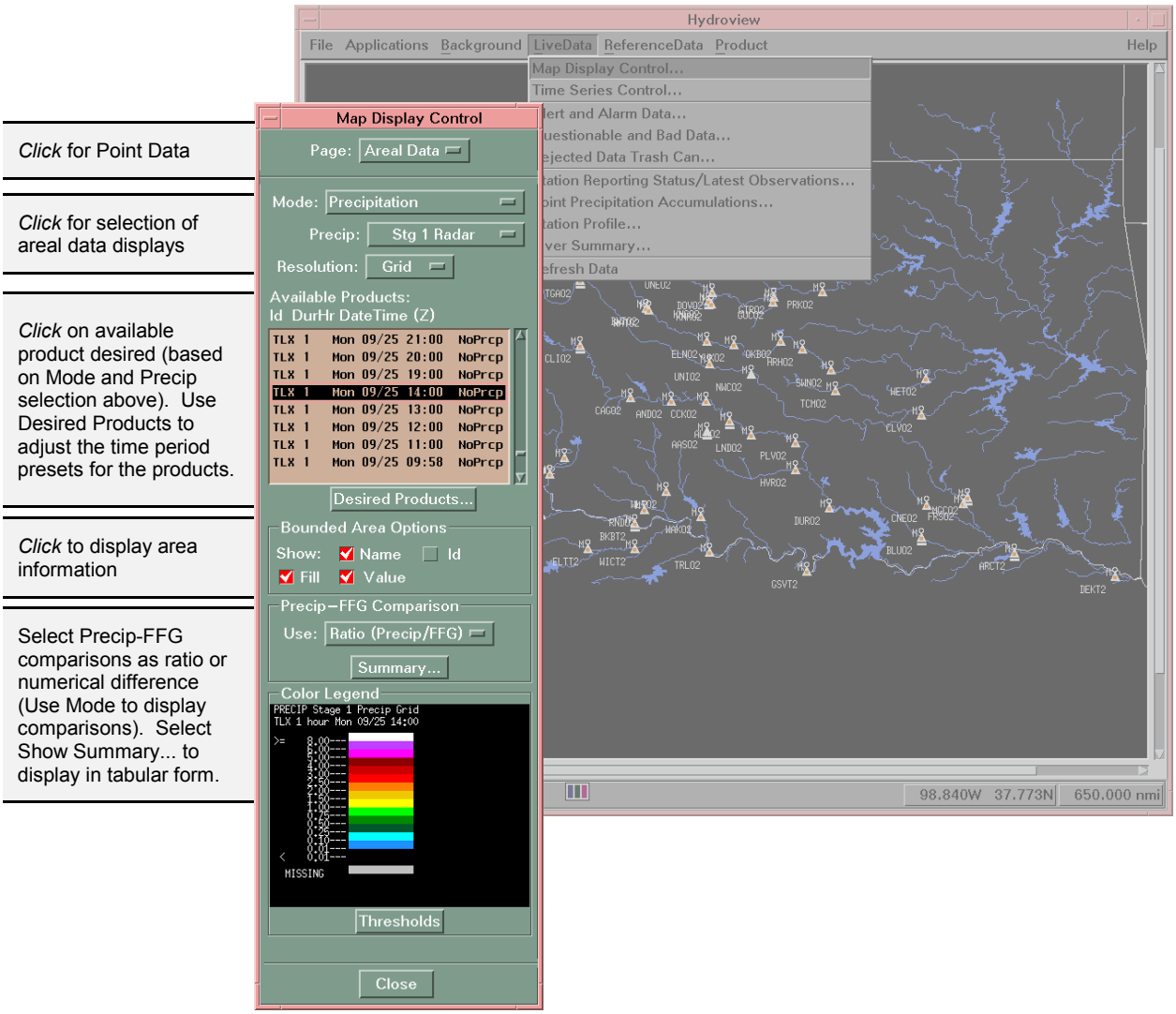
Stage data displayed can be the observed, the maximum forecast, the maximum of the observed or forecast or the departure of one of these values from flood stage. The flood stage value can also be displayed.

Precipitation displays can be filtered by suppressing zero or missing values

Precipitation time period will display total precipitation from the specified end time (limited to 12 hours back from current time) and starting up to 72 hours before the end time and is best set by *Clicking* on the Set Time Period button.

BE SURE TO SELECT DATA TO BE DISPLAYED FIRST (Point Data Filter).

Areal Display Control Window - Use this selection to display areal and gridded data on the **Root Window** Geographic Display.



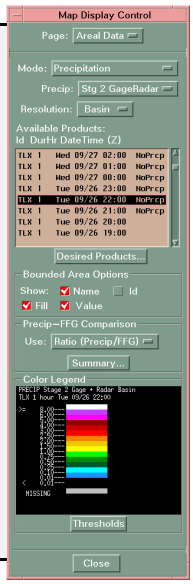
Access this selection from the **Root Window** by *Clicking* on **LiveData**, then on **Map Display Control**, then on **Page: Areal Data**.

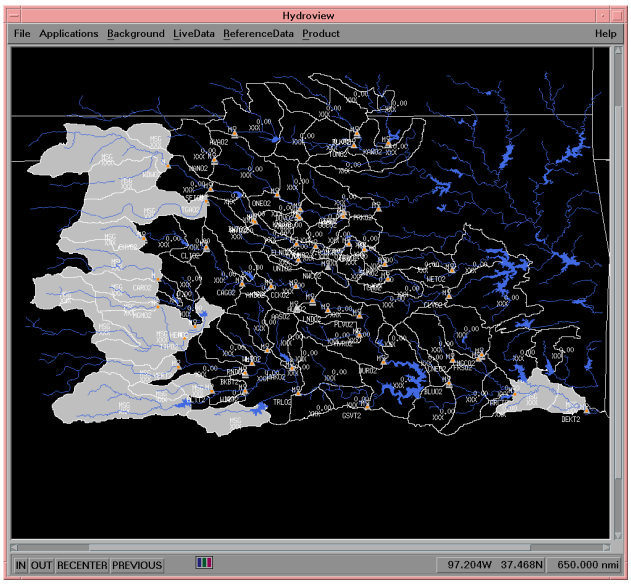
Notes:

Mode options include *Precipitation*, *Flash Flood Guidance* and *Compare Precip & FFG*
Precip options include *Stg 1 Radar*, *Stg 2 Gage*, *Stg 2 GageRadar* and *QPF*
Resolution options include *Grid*, *County*, *Zone* and *Basin*
Color legend is displayed when areal plots are displayed (e.g. radar grids, FFG and MAPs). The color choices and corresponding thresholds can be adjusted using the *Thresholds* button.
Once a mode and options have been selected and displayed, the geographical display can be cleared by switching to different mode.

Areal Display Control Window - Flash Flood Monitoring Function - Presented are examples of Precipitation and Precipitation and Flash Flood Guidance Comparison displays.

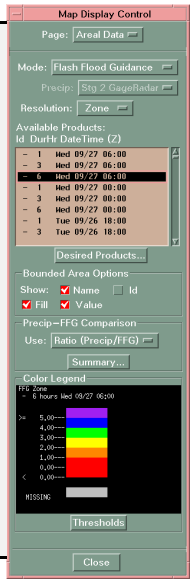
Selection of the Areal Data Display options shown provides the data display presented at the far right.

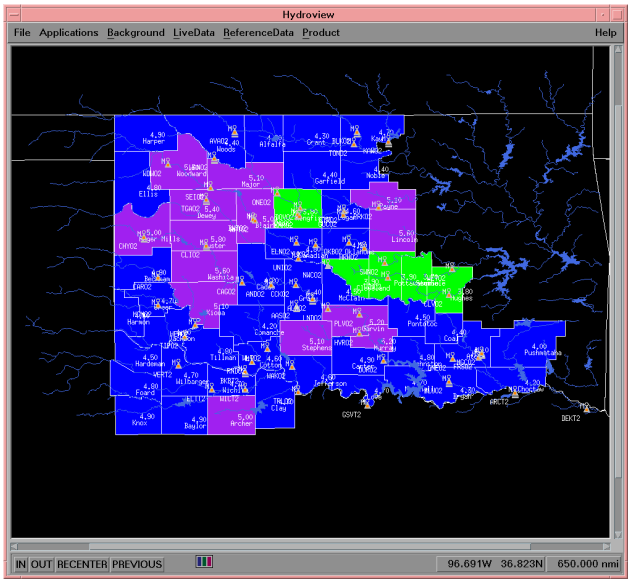




Stage II Gage/Radar Precipitation Display

Selection of the Areal Data Display options shown provides the data display presented at the far right.





Precipitation/FFG Ratio Comparison

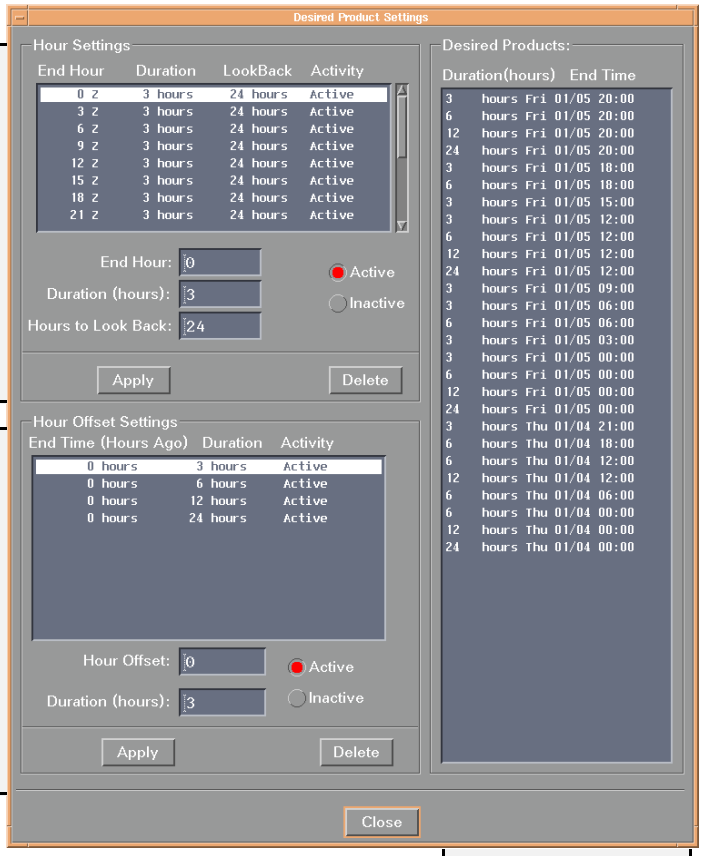
Access these selections from the **Root Window** by successively *Clicking* on **LiveData**, **Map Display Control**, **Page: Areal Data**, and then on the options shown.

Notes: The various data modes, precipitation sources and resolutions are discussed on the previous page and in the introduction to this chapter.

Areal Data Window (Desired Product Settings) - Use this selection to modify the Available Product Settings on the Areal Data Display Control Window.

Modify the absolute settings by *Clicking* on a setting and changing the End Hour, Duration and/or Hours to Look Back or by deleting the entry. *Click* Apply to activate IN THIS WINDOW ONLY.

Modify the relative settings (relative to the current time) by *Clicking* on a setting and changing the Hour Offset (from the current time) and/or Duration or by deleting the entry. *Click* Apply to activate IN THIS WINDOW ONLY.



Use the information in this column to note products desired. No changes can be made here.

Access this selection from the **Root Window** by successively *Clicking* on **LiveData**, **Map Display Control**, **Page: Areal Data**, then on Desired Products (in the Map Display Control Window).

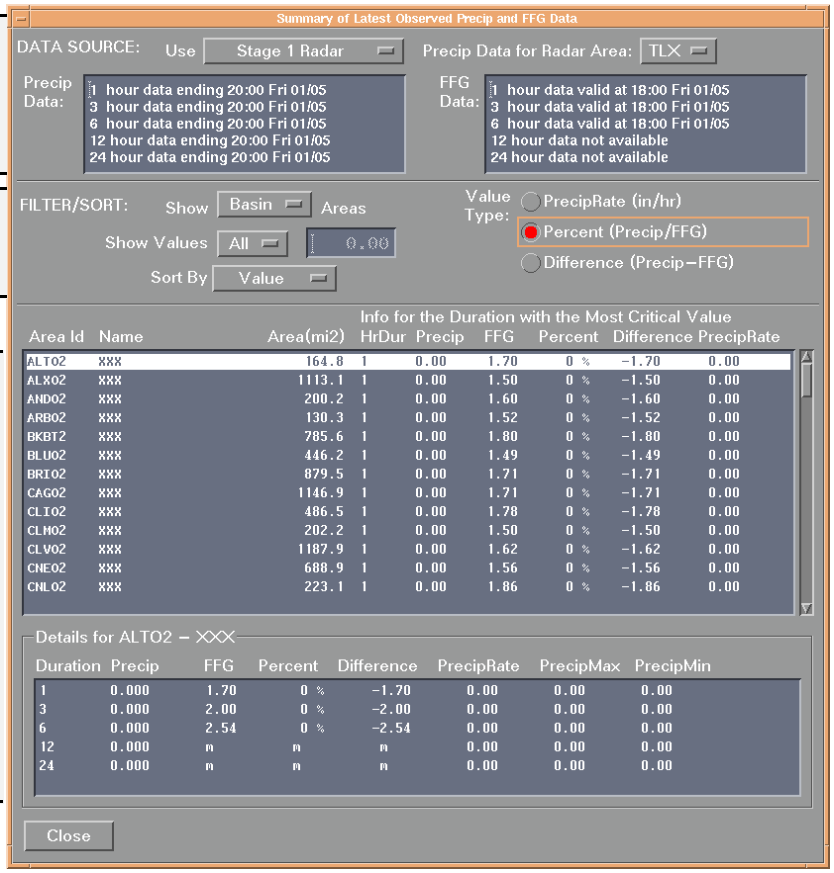
Notes: **T**he Desired Products Settings can be used to modify the Available Products list on the Areal Data Display Control which then can be displayed in the geographic display in the HydroView Root Window. The absolute settings (Hour Settings) are typically set to common end hours (e.g., 00Z, 03Z). To set up settings based on the current time, use the relative settings (Hour Offset Settings).

Areal Data Window (Precip-FFG Comparison Summary) - Used to review a tabular display of various observed precipitation and flash flood guidance comparisons to evaluate flash flood threats by quickly scanning the data and determining areas of concern.

Select data source (Stage 1 Radar, Stage 2 Gage Only or Stage 2 Radar/Gage). Available precipitation and FFG data are listed.

Use to filter stations listed below and to prioritize the order of the list (Sort By).

Sorted data are displayed here. When more information about a particular area is desired, select the area from the list and the detailed information for all durations is shown in the lower portion of the window.



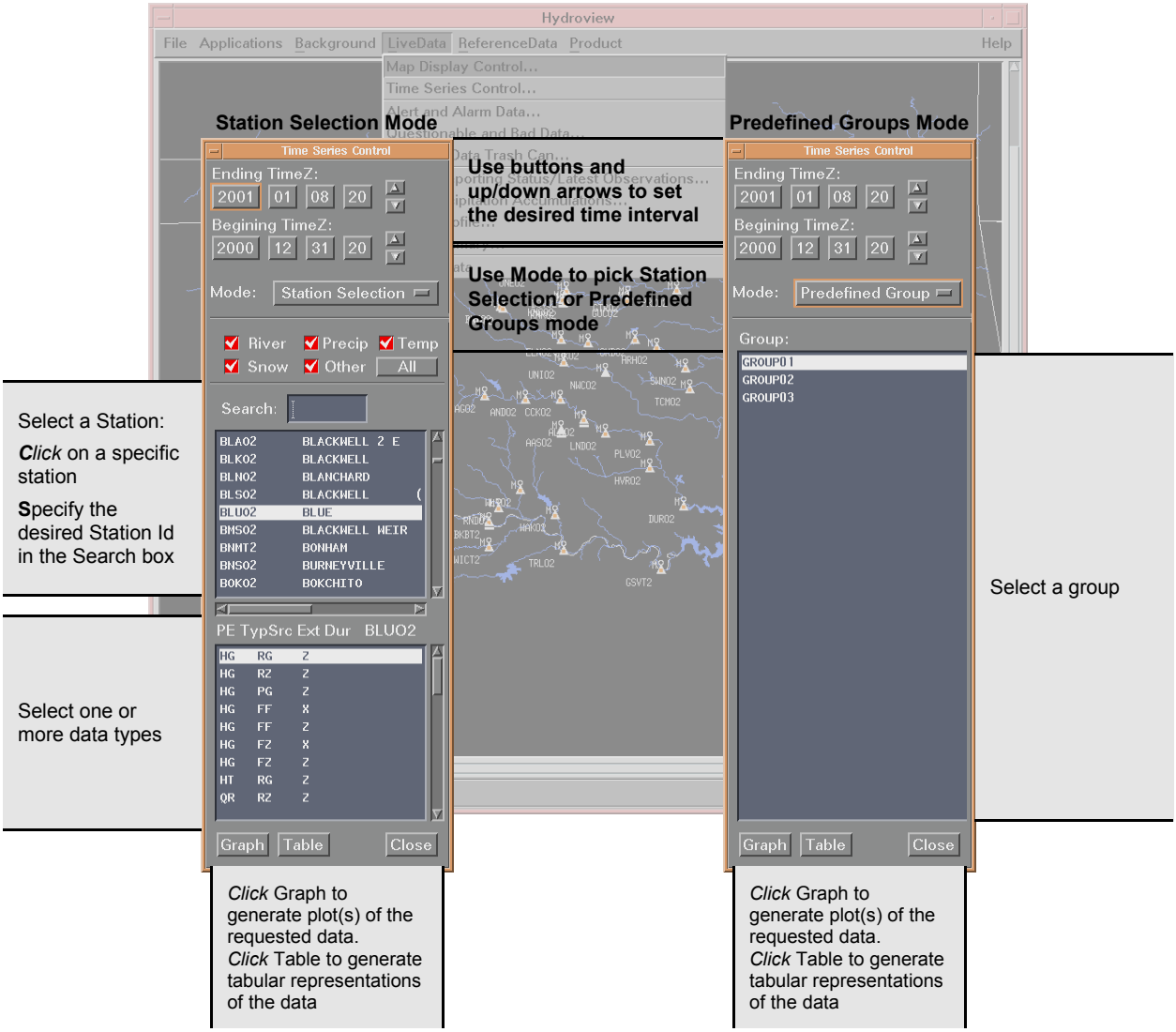
Access this selection from the **Root Window** by successively *Clicking* on **LiveData**, **Map Display Control**, **Page: Areal Data**, and **Summary** (under Precip-FFG Comparison).

Notes:

When sorting by Value, the most critical stations (based on the selected value-type option) are displayed first.

The Show Values filter above lists all stations or only those stations with values <= or => the entered value. The value it considers is specified using Value Type.

Time Series Control Window - Use this selection to initiate either graphic or tabular time series data displays for a specifiable time period for either a specified station or a predefined group.



Access this selection from the **Root Window** by Clicking on **LiveData,** then on **Time Series Control**. Alternately, this selection can be accessed by double clicking on the station icon in the **Geographical Display**.

Notes:

Plot request is defined via the **Time Series Control Window**; the Graph or Table pushbutton is selected to generate and display the time series.

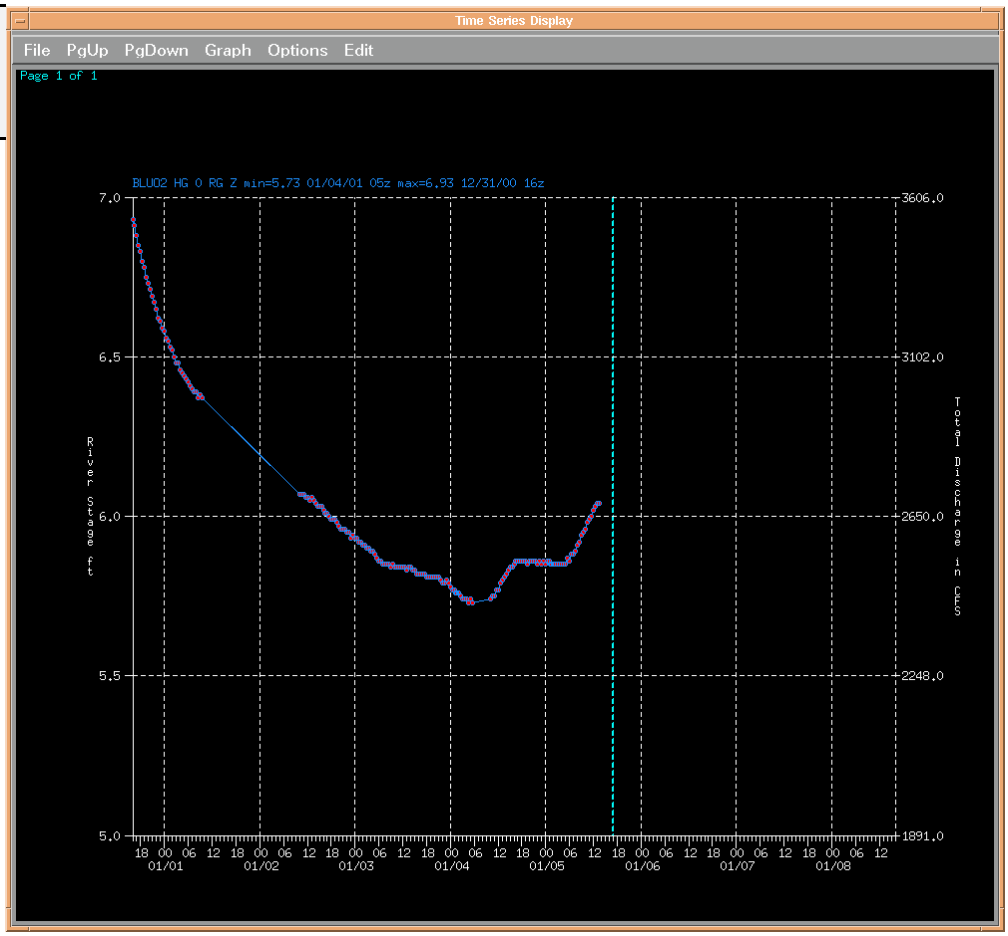
Default time period is 5 days in the past to 3 days in the future, based on current time.

Multiple data types may be specified in Station Selection mode only if they are in the same physical element class. Exceptions: PC and PP may not both be chosen; only one PP data type may be chosen.

See Appendix D for a full discussion of the WHFS Time Series Function.

Graphical Time Series Display Window - Use this window to view the graphical time series representation for the selected station or pre-defined group. (See **Time Series Control Window**, p. 3-22.)

Use the various menu options to view other graphs in the predefined group



Access this selection from the **Root Window** by *Clicking* on **LiveData**, then on **Time Series Control**, then the **Graph** pushbutton. Alternately, access this selection from the **Root Window** by *Double Clicking* on a station icon, then *Clicking* the **Graph** pushbutton.

Notes: **A**ppendix D contains a full description of the functionality available within the **Time Series Graphical Display Window**.

Tabular Time Series Display Window - Use this window to view the tabular time series representation for the selected station or predefined group, and to view, insert, edit, or delete individual values. (See **Time Series Control Window**, p. 3-22.)

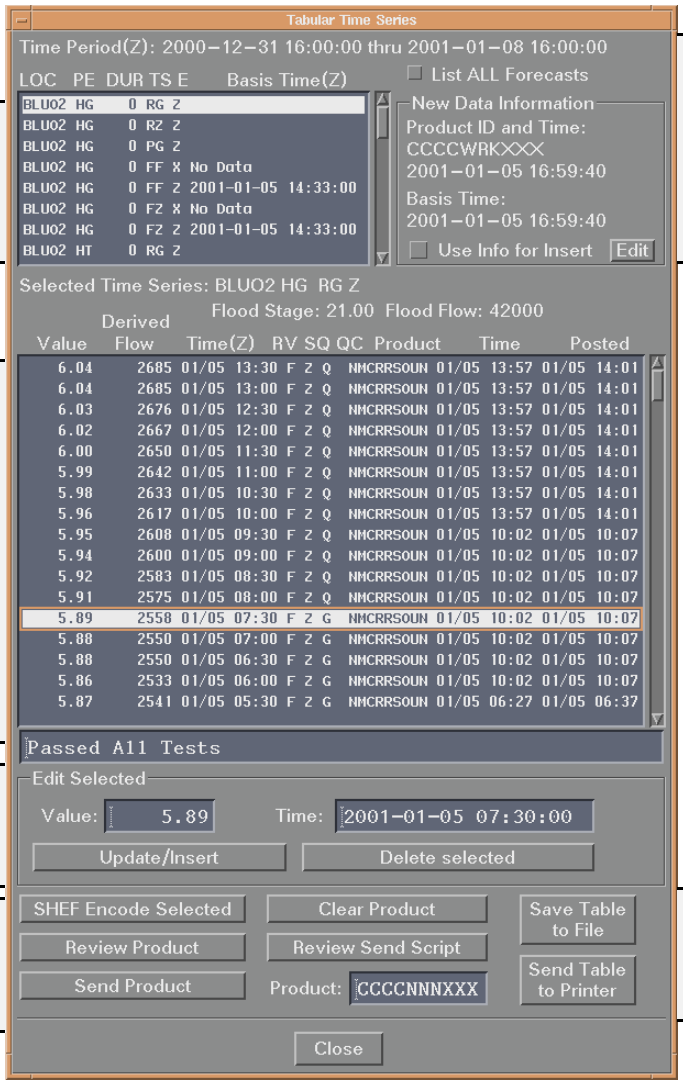
Select a time series type for display below

Time series values for the selected type.

Click on a value and data are displayed below.

Delete or update the selected value OR add a new value to the table

SHEF Encode Section -
Clear product
Build, review, distribute product



Data used for new table value if check box selected

Click Edit to modify these data

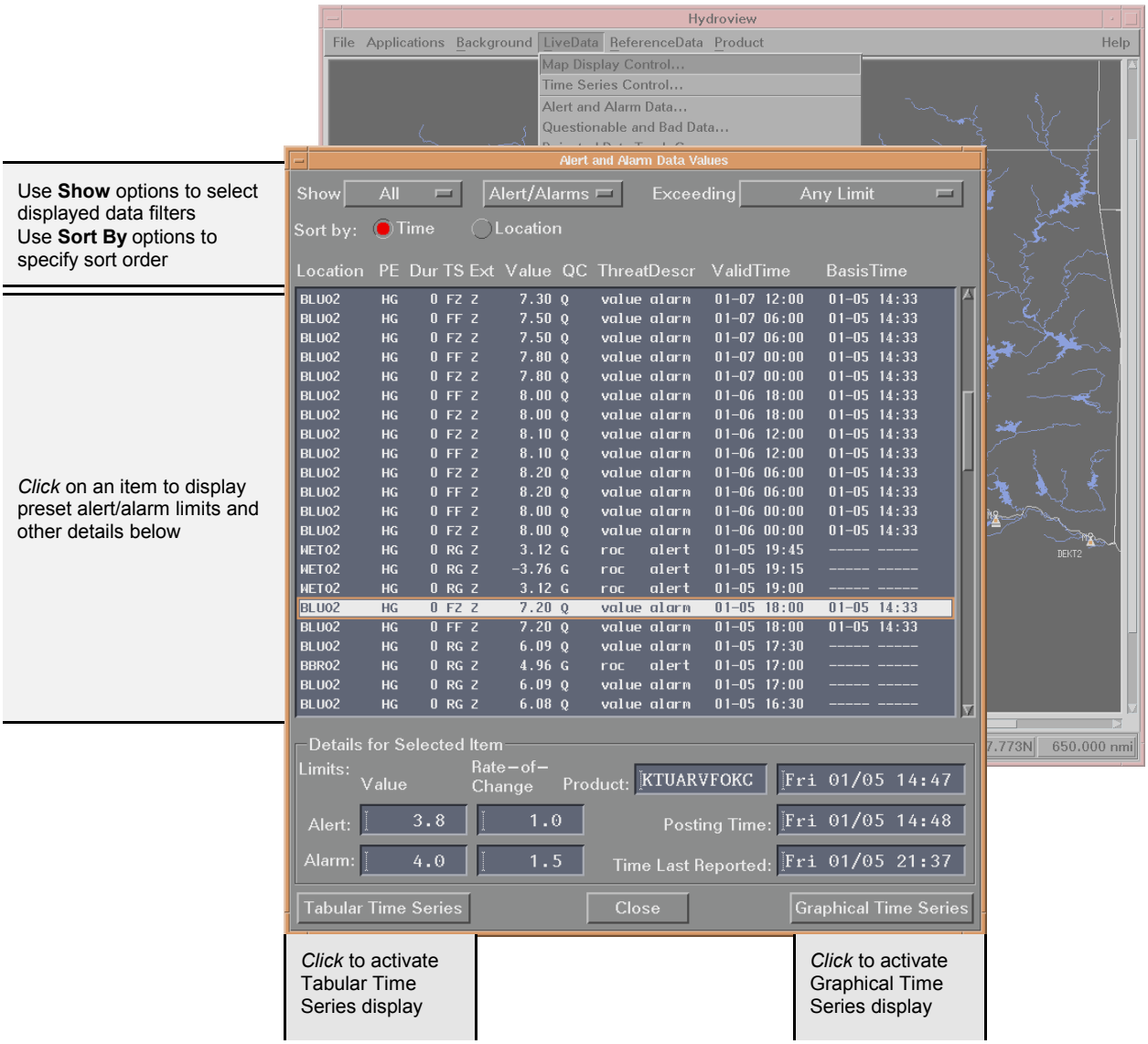
Options to save the time series table to a file or make a hard copy

Access this selection from the **Root Window** by *Clicking* on **LiveData**, then on **Time Series Control**, then the **Table** pushbutton. Alternately, access this selection from the **Root Window** by *Double Clicking* on a station icon, then *Clicking* the **Table** pushbutton.

Notes:

Values may be added, edited, or deleted.
Products may be generated, reviewed, distributed, or cleared.
Appendix D contains an in-depth description of all of the functions of the Tabular Time Series.

Alert and Alarm Data Window - Use this selection to display data that have exceeded alert and alarm thresholds based on value and rate-of-change.



Use **Show** options to select displayed data filters
Use **Sort By** options to specify sort order

Click on an item to display preset alert/alarm limits and other details below

Click to activate Tabular Time Series display

Click to activate Graphical Time Series display

Access this selection from the **Root Window** by *Clicking* on **LiveData**, then on **Alert and Alarm Data**.

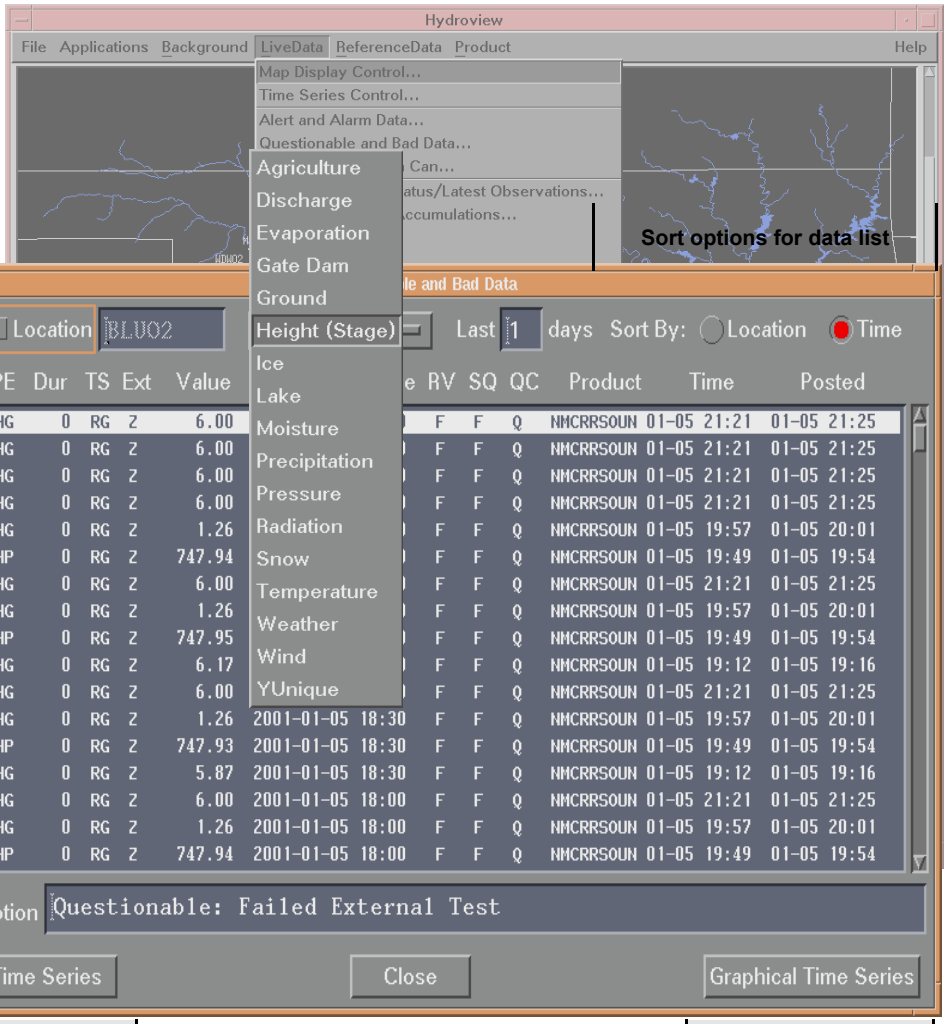
Notes:

Use the **Show** filter options to display only those alert and alarm data records of interest. Options include All, Observed, or Forecast data records; Alerts, Alarms, or both Alert/Alarms data records **Exceeding** Any Limit, Value, or Rate-of-Change (roc).

***C**lick* **Tabular Time Series** or **Graphical Time Series** to view the record within its time series context and edit real time data. Time Series displays and features are shown on pp. 3-22 through 3-24. An in-depth discussion of the time series function is contained in Appendix D.

This display is read-only; changes to data or alert/alarm limits cannot be made.

Questionable and Bad Data Window - Use this selection to display all data that have been marked as questionable or bad by the quality control processes.



Filter data anomalies list by Location and/or by Observation Type pull-down list (default is all locations)

Select number of days back to list

Click on an item above to view quality control data anomaly description

Click to activate Tabular Time Series display

Click to activate Graphical Time Series display

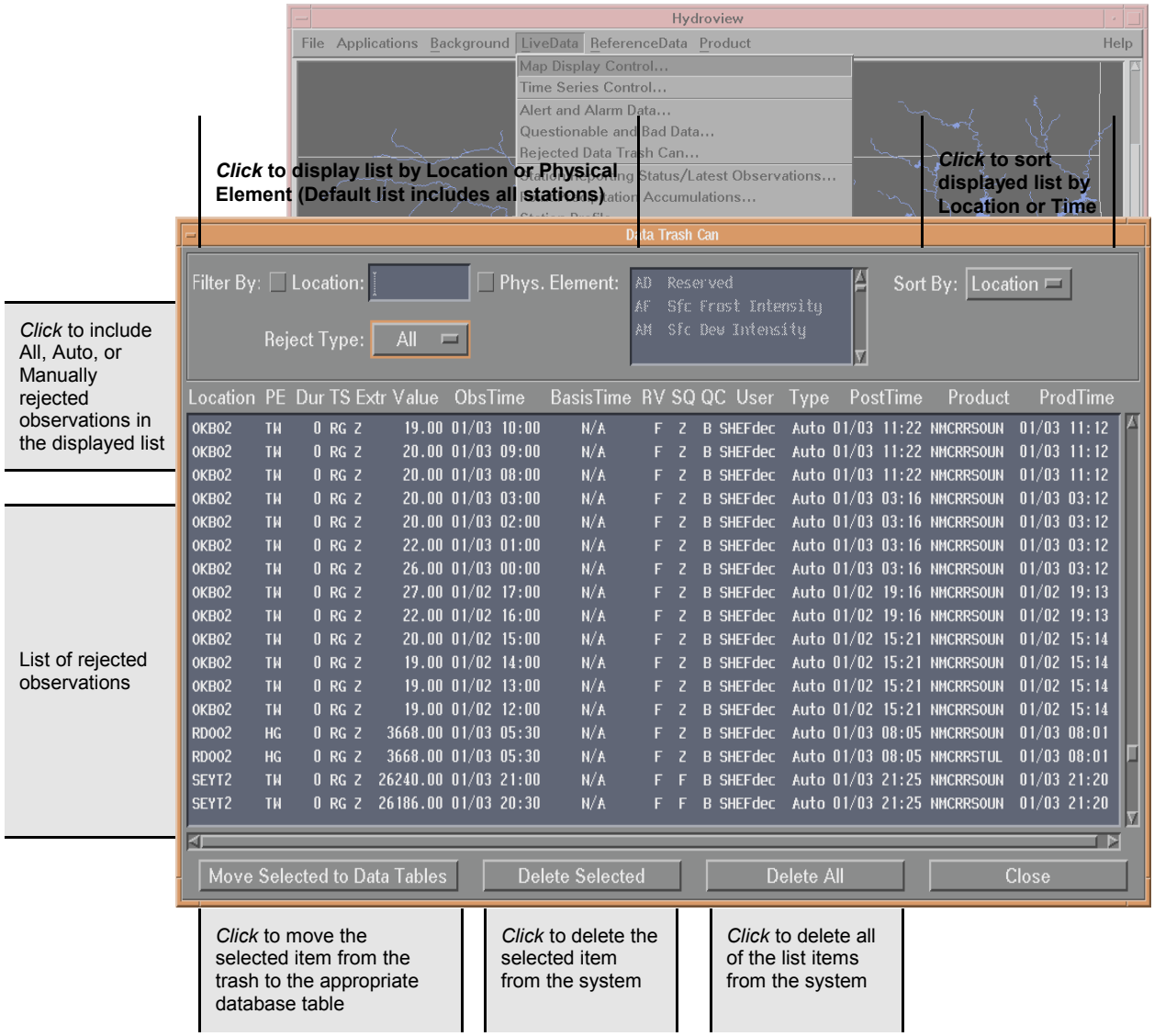
Access this selection from the **Root Window** by *Clicking* on **LiveData,** then on **Questionable and Bad Data**.

Notes:

Other than entering the station location and setting the number of days back, no information or data can be changed in this window.

Time Series displays and features are shown on pp. 3-22 through 3-24. An in-depth discussion of the time series function is contained in Appendix D.

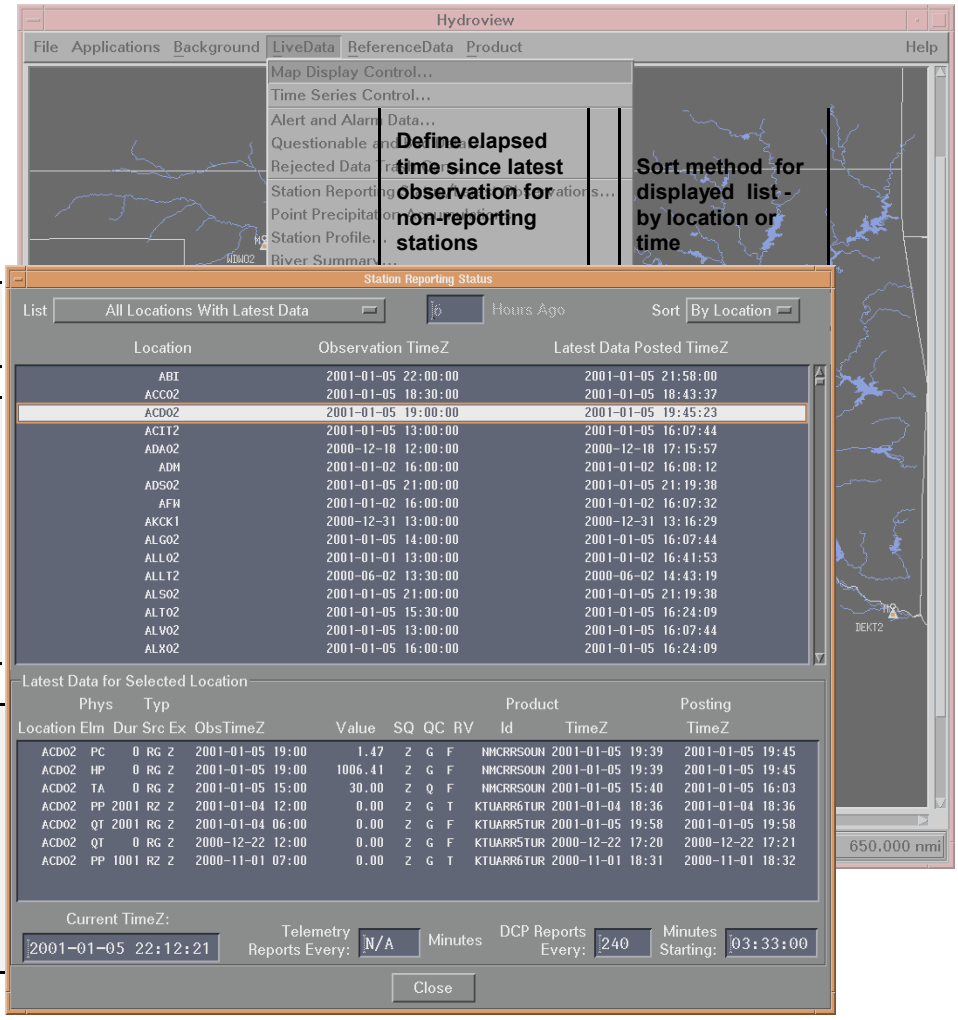
Rejected Data Trash Can Window - Use this selection to display manually or automatically rejected observations, move them to data tables, or delete them from the system.



Access this selection from the **Root Window** by *Clicking* on **LiveData,** then on **Rejected Data Trash Can**.

Notes: **D**ata that are not removed or deleted from this list are purged by the system after the retention period (defined through HydroBase) has elapsed.

Station Reporting Status/Latest Observations Window - Use this selection to display the reporting status of all stations in the HSA for all measured parameters.



Click to select list of displayed stations

Click to select station

Detailed information for the latest available data for the selected station

Data codes are as shown in the Standard Hydrometeorological Exchange Format Handbook

Access this selection from the **Root Window** by *Clicking* on **LiveData,** then on **Station Reporting Status/Latest Observations**.

Notes:

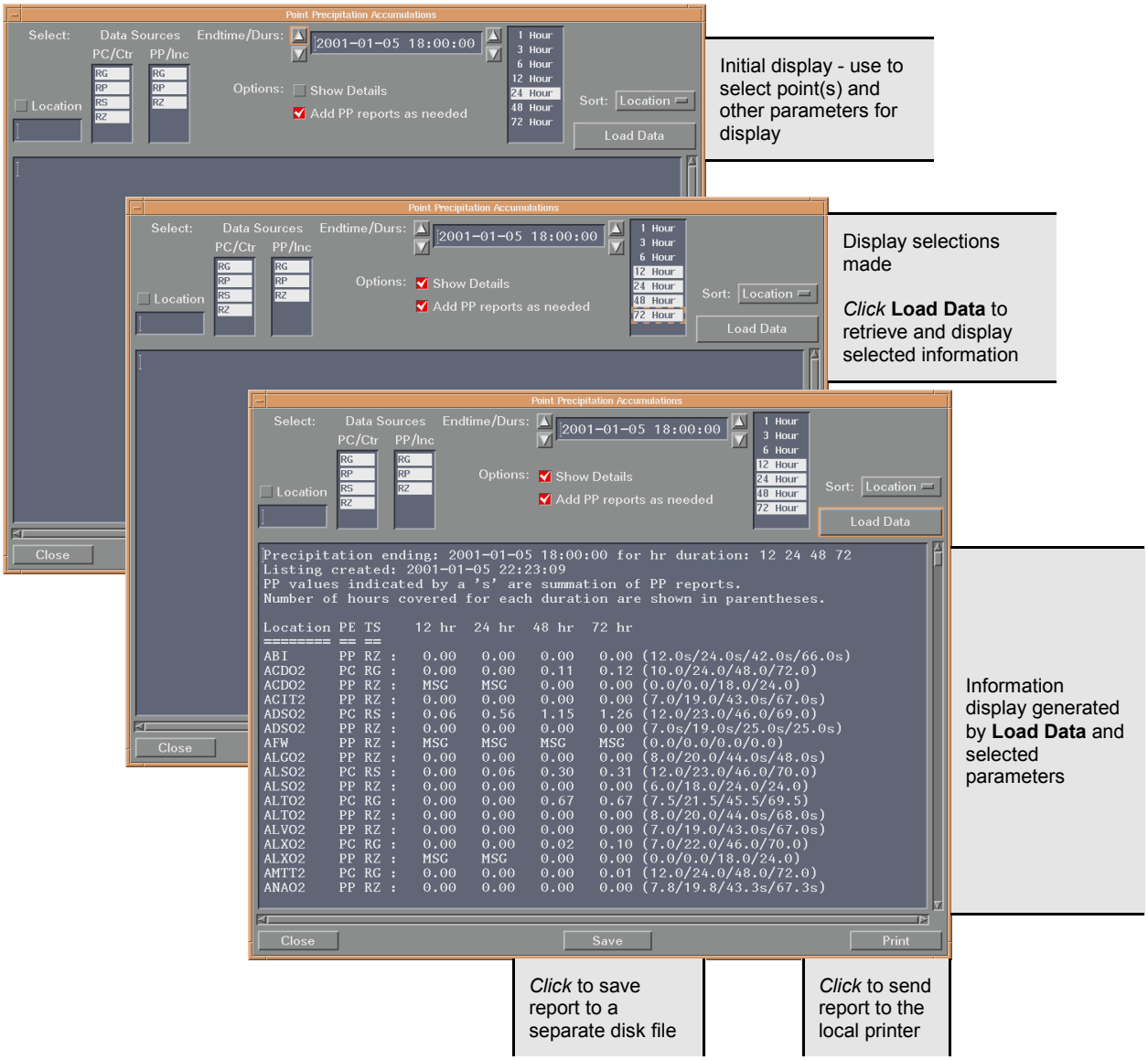
Station List options include - All Locations With Latest Data, Only Locations With Latest Data Older Than [Hours Ago parameter], and Locations Without Any Latest Data.

Hours Ago selection at the top of the window is based on observation time and applies only to Only Locations With Latest Data Older Than option.

Other than setting the Hours Ago parameter, no information or data can be changed in this window.

Use of the Station Reporting Status requires the shef_post_latest token to be set to ON in the /awips/hydroapps/.Apps_defaults_site file.

Point Precipitation Accumulations - Use this option to select then display precipitation accumulation information for the selected point.



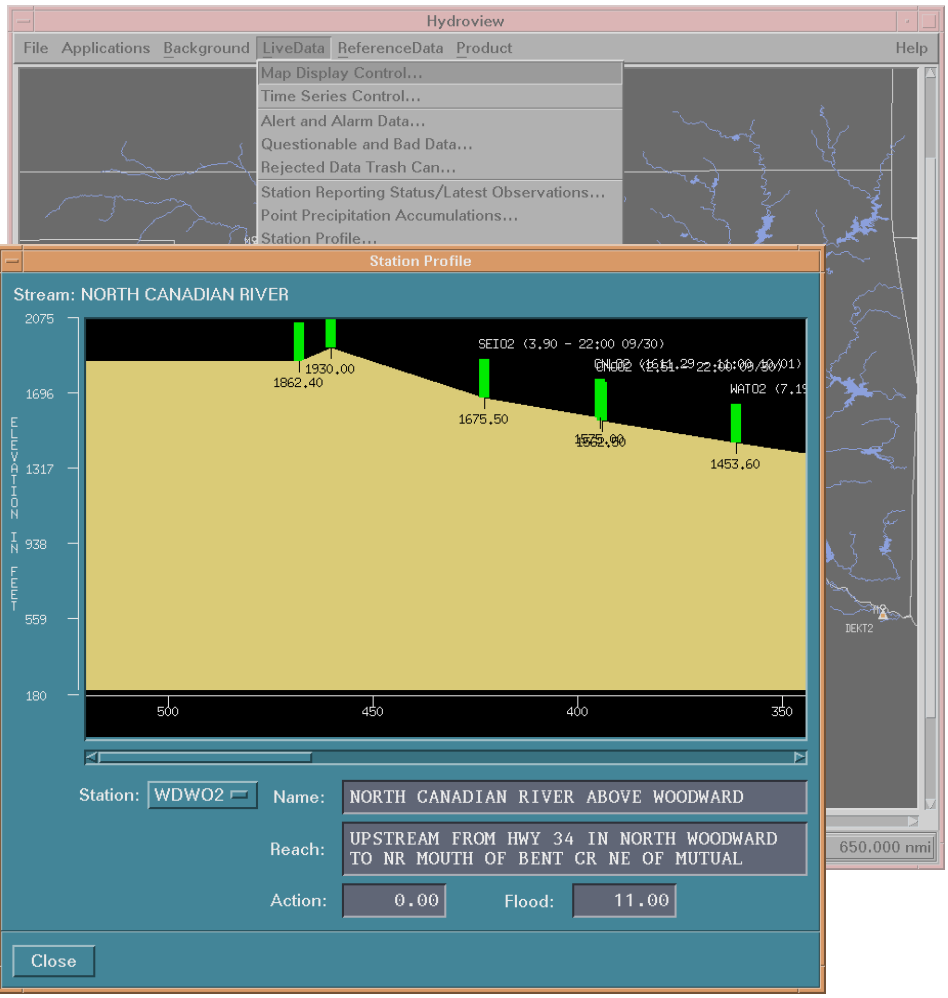
Access this selection from the **Root Window** by *Clicking* on **LiveData**, then on **Point Precipitation Accumulations**.

Notes:

Specify display and data options, then *Click* **Load Display** to retrieve and display the selected information.

Precipitation data are retrieved and accumulated "on-the-fly" when **Load Display** is *Clicked*, thereby providing up-to-the-minute information for review.

Station Profile Window - Use this selection to display geophysical information and current stage data for the selected station and other stations along the reach.



Station information and data includes -

Station ID with latest stage and associated time and date

Color coded stage bar
green = below flood stage
yellow = above action stage
red = above flood stage

Actual elevation (ft, MSL)

Click to select any station along the reach

Information to be displayed for the selected station

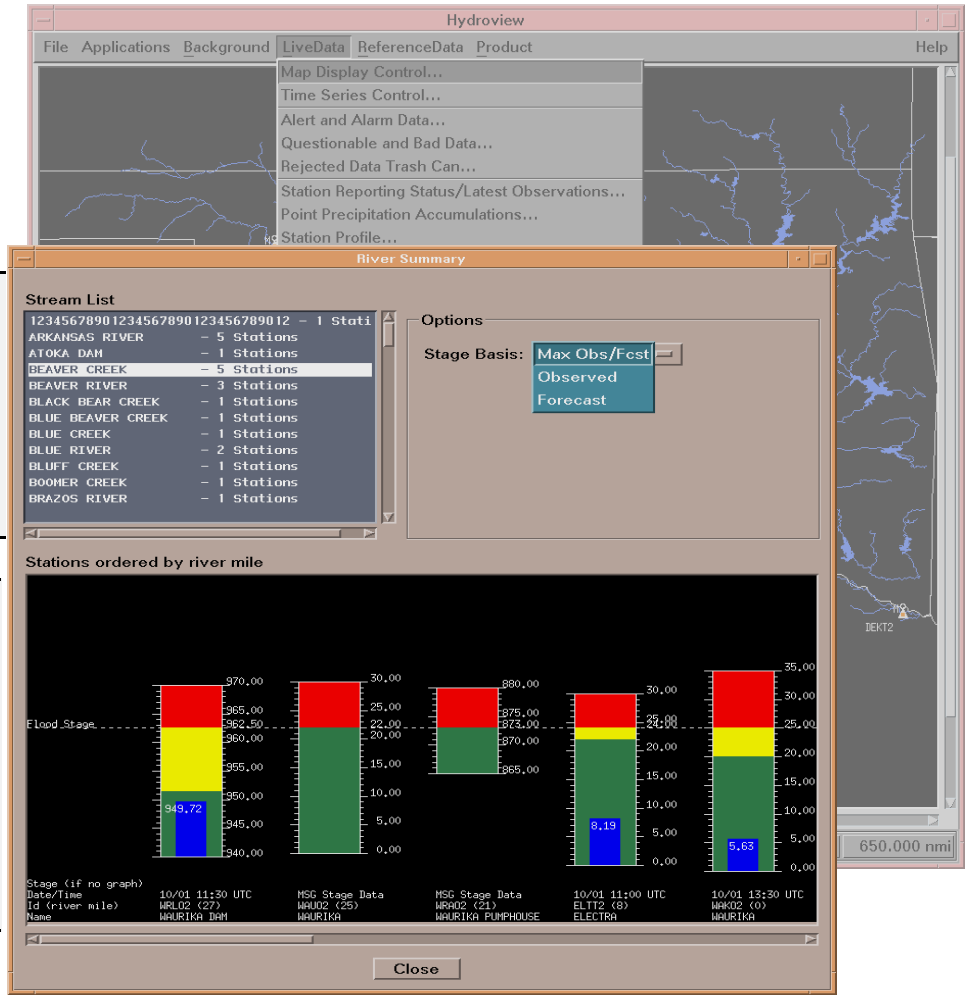
Access this selection from the **Root Window** by *Clicking* on **LiveData,** then on **Station Profile**.

Notes: **T**his display is read-only, changes to data or information cannot be made. **T**he ordinate of the graphical display is feet above mean sea level (MSL), the abscissa is river miles.

River Summary Window - Use this selection to display currently available stage data for all stations along a selected stream.

Click on stream of interest, stations indicated will have maximum stage (Current Observed or Maximum Forecast) or Observed only or Forecast only displayed below in graphical form.

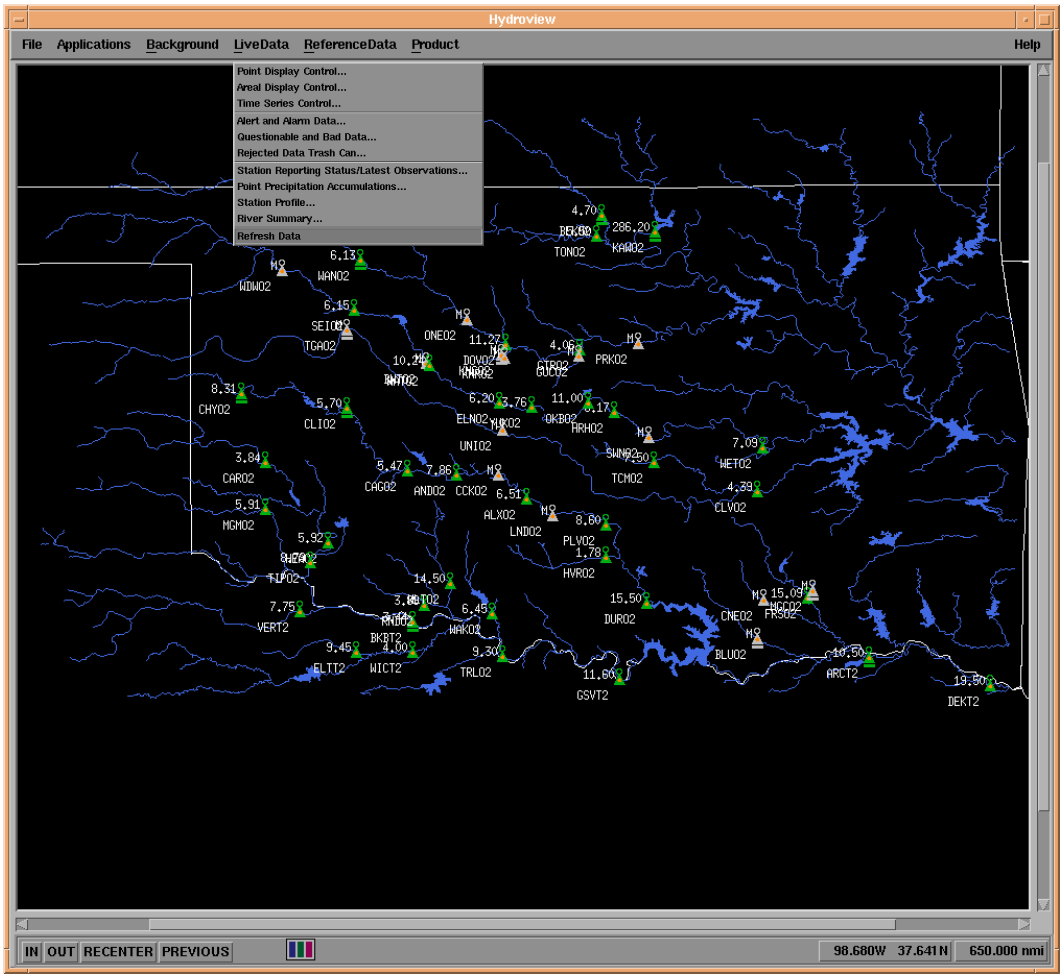
Stage displayed in graphical form along with reference values (below action stage - green, above action stage - yellow, above flood stage - red). Station identifiers and observation times are listed below the graphic for each station.



Access this selection from the **Root Window** by *Clicking* on **LiveData**, then on **River Summary.**

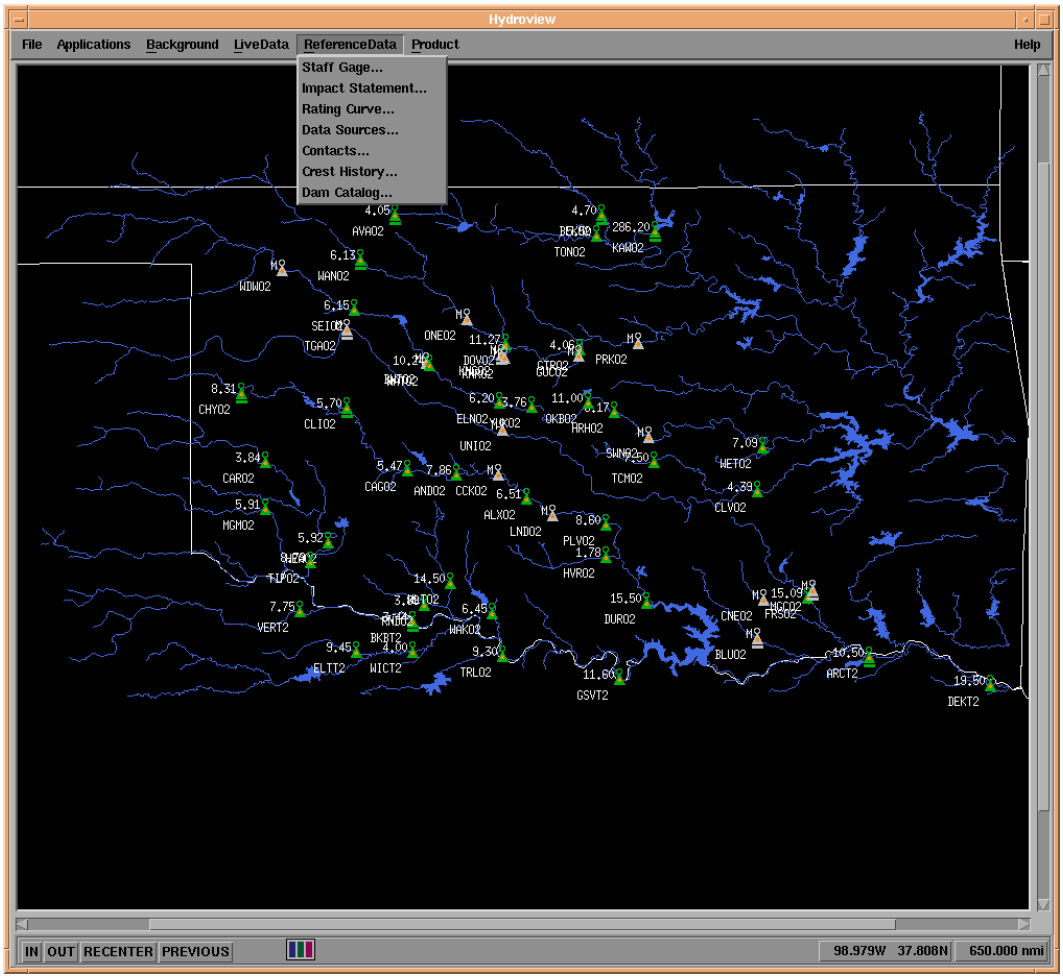
Notes: **S**tations are ordered by river mile.
Any missing data are indicated in the Date/Time category below each graphic.

Refresh Data - Use this selection to load the latest available data for all locations. The system automatically refreshes the display every 15 minutes.



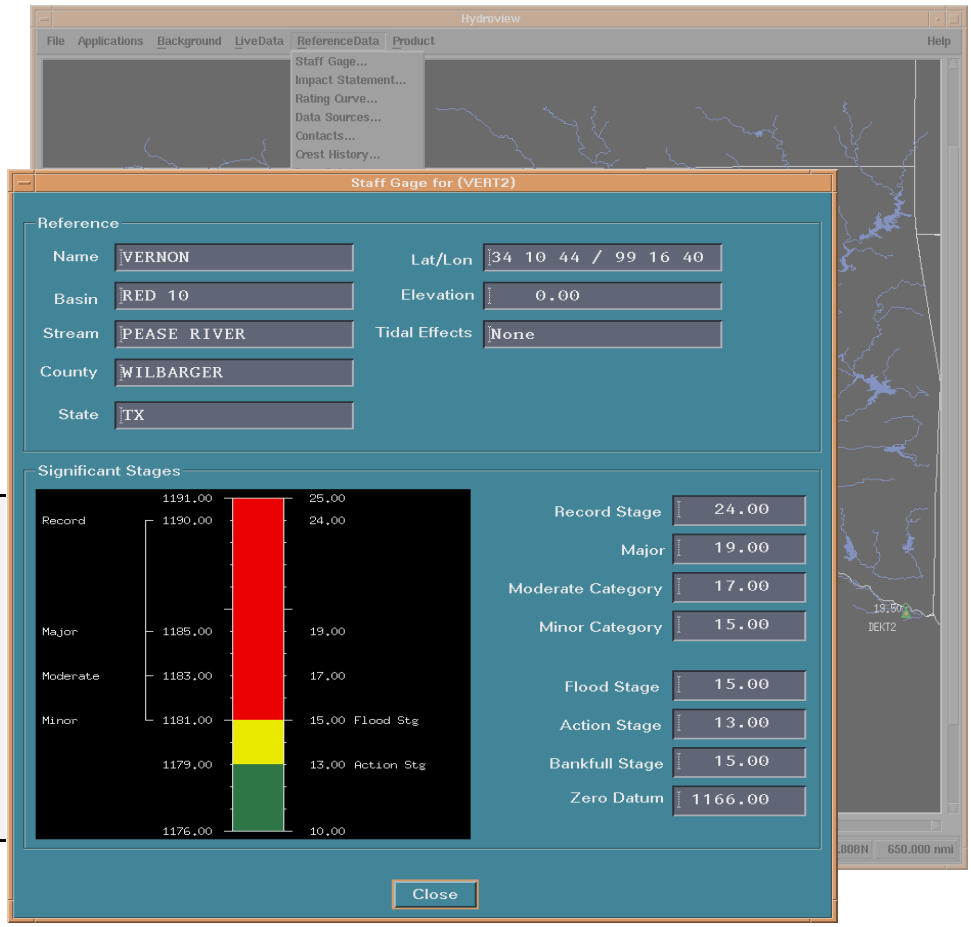
Access this selection from the **Root Window** by *Clicking* on **LiveData**, then on **Refresh Data**.

Root Window (Reference Data selected from the MenuBar) - Use this selection to display background information and data for a selected station.



Access this selection from the **Root Window** by *Clicking* on **Reference Data**.

Staff Gage Window - Use this selection to display gage background information for a selected station.



Elevation above mean sea level is displayed on the left of the diagram, stage on the right.

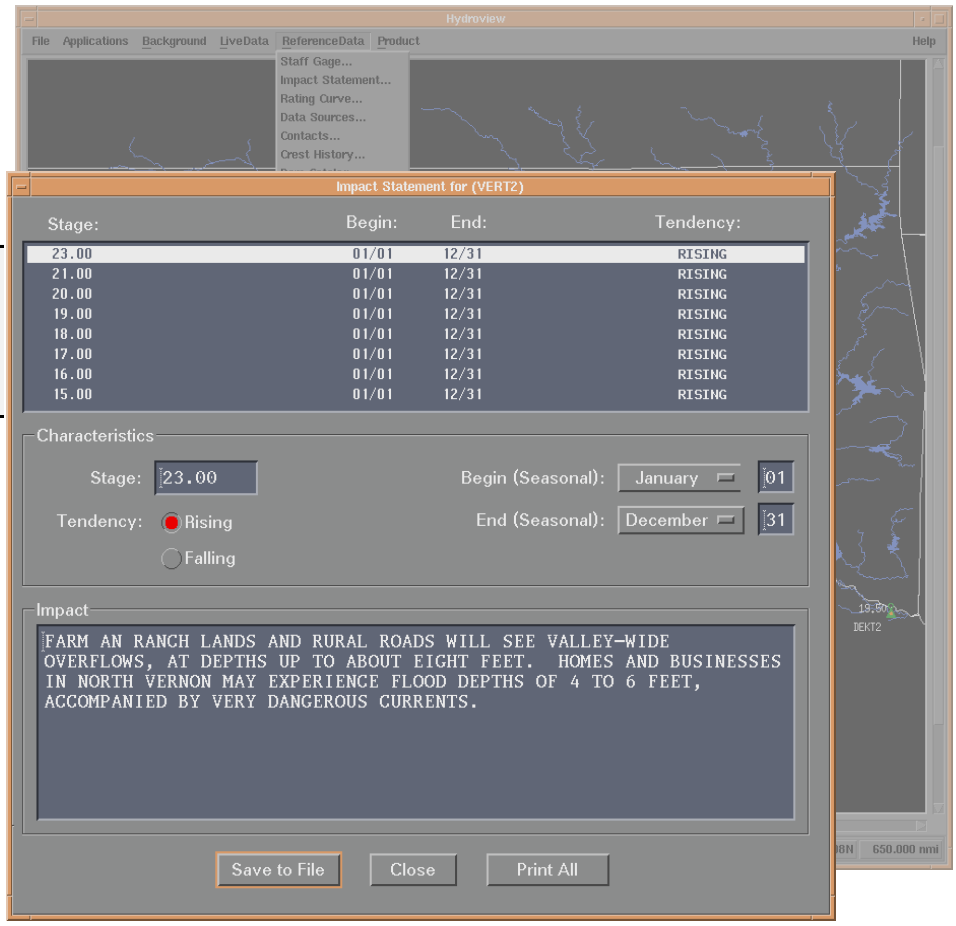
Access this selection from the **Root Window** by *Clicking* on **ReferenceData,** then on **Staff Gage**.

Notes:

This display is read-only, changes to data or information cannot be made.
The stage display is color coded - Red = Above Flood Stage, Yellow = Above Action Stage, Green = Below Action Stage.
Select station in **Geographic Display** or through **Station Selection Window.**

Impact Statement Window - Use this selection to display the impact statements for various stages for a selected station.

Select a stage to review associated impact statement

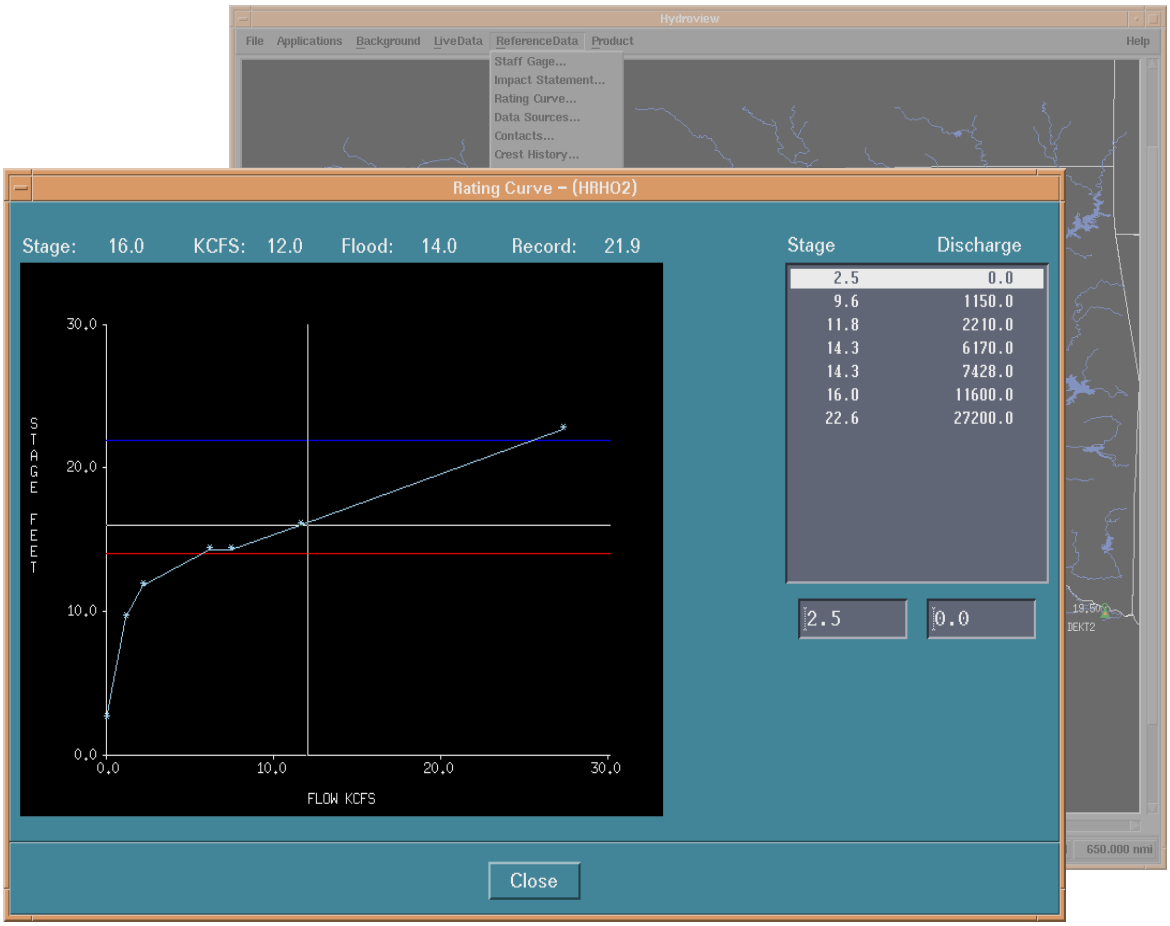


Access this selection from the **Root Window** by *Clicking* on **ReferenceData**, then on **Impact Statement**.

Notes:

This display is read-only, changes to data or information cannot be made.
Select station in **Geographic Display** or through **Station Selection Window.**
Default seasonal display is January - December, however there may be specific seasonal impact statements if flooding affects certain locations such as recreation areas.

Rating Curve Window - Use this selection to display the rating curve for a selected station.



Access this selection from the **Root Window** by *Clicking* on **ReferenceData**, then on **Rating Curve.**

Notes:	**T**his display is read-only, changes to data or information cannot be made. **S**elect station in **Geographic Display** or through **Station Selection Window**. **R**aw data used in generating the curve is displayed on the right. **R**ecord flood level will be shown with a blue horizontal line, flood stage will be shown with a red horizontal line. ***C****licking* on the graph display will produce crosshairs to aid in reading the curve - flow and stage values corresponding to the crosshair location are shown at the top.

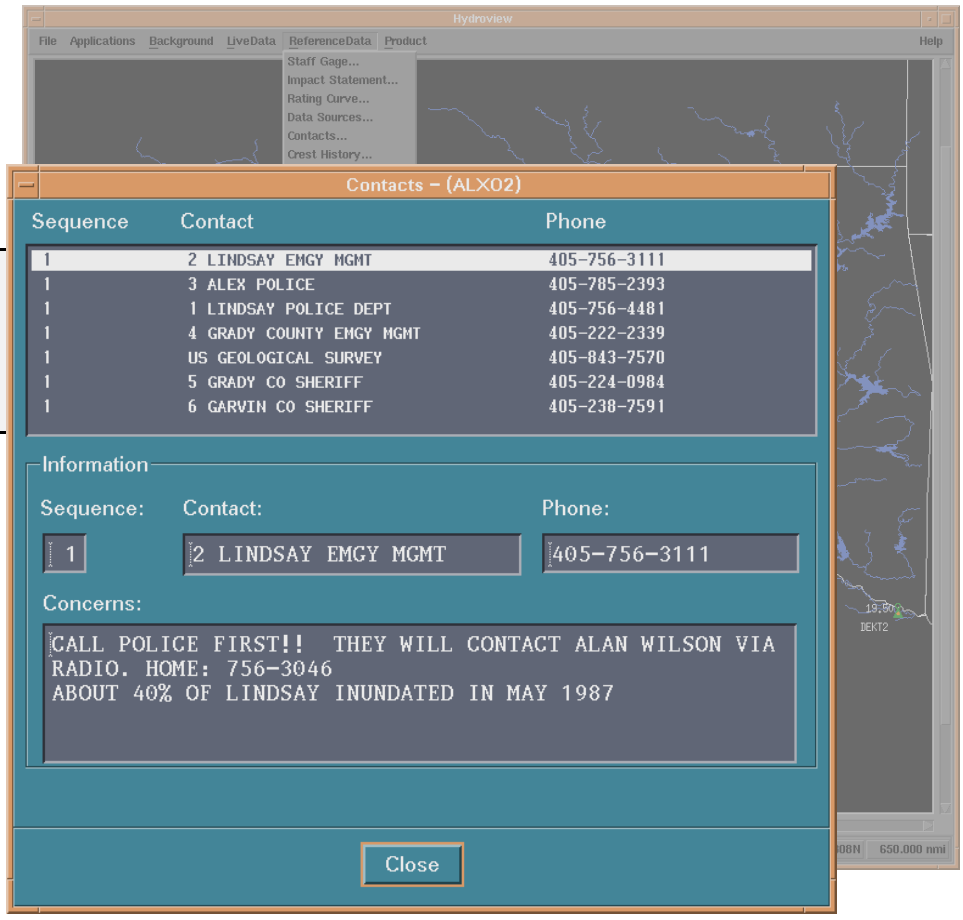
Data Sources Window - Use this selection to display information on data sources (e.g., observers) for a selected station. Screens for Observer and DCP are shown.

Access this selection from the **Root Window** by *Clicking* on **ReferenceData,** then on **Data Sources.**

Notes:	**S**elect DCP, Observer, or Telemetry to view corresponding information. **T**hese displays are read-only, changes to data or information cannot be made. **S**elect station in **Geographic Display** or through **Station Selection Window.**

Contacts Window - Use this selection to display background information (e.g., telephone numbers) for the contact(s) for a selected station.

Click on a contact name to display information (as shown below)

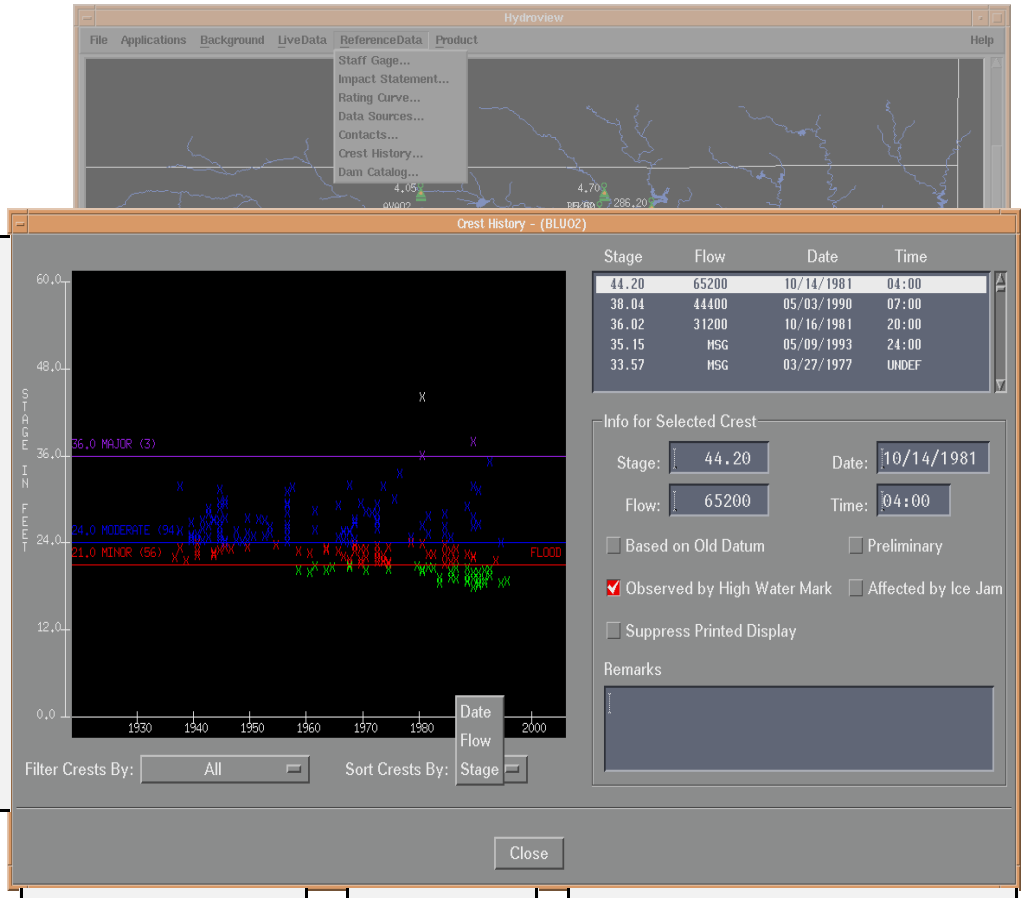


Access this selection from the **Root Window** by *Clicking* on **ReferenceData,** then on **Contacts.**

Notes:

This display is read-only, changes to data or information cannot be made.
Contacts are listed in order of importance.
Select station in **Geographic Display** or through **Station Selection Window.**

Crest History Window - Use this selection to display data and information for historical crests for a selected station.



Historical crest data can be viewed graphically or in tabular form (far right portion of the window).

A stage highlighted in the tabular section will also be highlighted on the graph.

Horizontal lines and data point colors on the graph indicate - major flood (purple), moderate flood (blue), minor flood (red) and action level (yellow)

Filter options include All (all data points displayed), Above Action Stage (only data points above the action level are displayed), Below Action Stage (only data points below the action level are

Tabular data (above right) sort options include by Date, Flow, or Stage.

Observation basis definitions - Old Datum (based on different input data), High Water Mark (based on observed data from a high water mark), Ice Jam (based on a crest as a result of an ice jam), Preliminary (crest not verified), Suppress Printed Display (data are suppressed in the HydroBase Text Reports E-19 crest history printout).

Access this selection from the **Root Window** by *Clicking* on **ReferenceData,** then on **Crest History.**

Notes: **T**his display is read-only, changes to data or information cannot be made. **S**elect station in **Geographic Display** or through **Station Selection Window.**

Dam Catalog Window - Use this selection to display information on dams within the HSA. The initial dam catalog window (damcat) is displayed below.

Use Search/Filter Criteria to select dam(s) to view - General Information, Physical Dimensions, Reservoir and Agency Information and Dam Break Information (model output).

Select the required search criteria, then *Click* Apply Filter. The dam(s) which meet the criteria will be displayed above.

Click on Exit to close. A dialogue box will appear, Click Accept to Exit.

Access this selection from the **Root Window** by *Clicking* on **ReferenceData,** on **Dam Catalog,** then on **OK** in the **Running Dam Catalog Dialogue Box .**

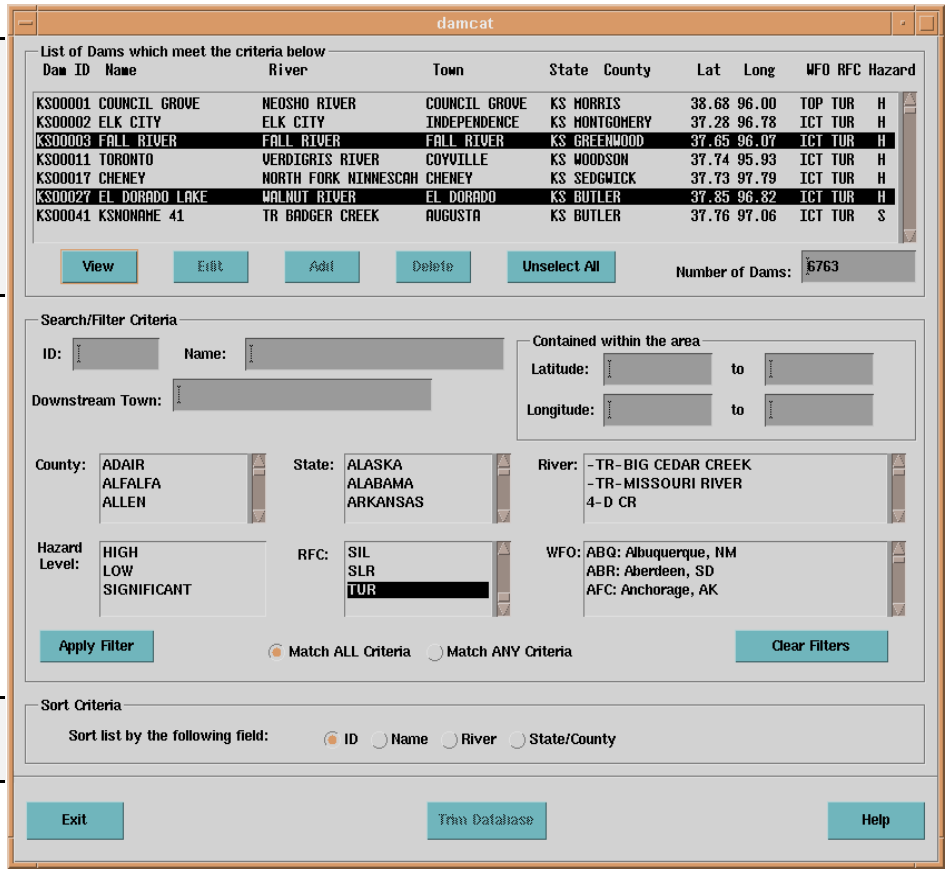
Notes:

Since the dam catalog contains available data for a large number of dams, the Search/Filter criteria must be used to limit the dams listed (be prepared for a delay when using the Search/Filter because of the size of the data file).
An example of a list of dams selected using the Search/Filter criteria is shown on the following page.
Buttons that are grayed-out are only active in HydroBase.

Dam Catalog Window (List of Selected Dams) - Displayed below is an example list of dams generated after using Search/Filter Criteria.

Click on dams of interest and then on View to review General Information, Physical Dimensions, Reservoir or Agency Information and Dam Break Information. Select multiple dams by holding down the 'Ctrl' keyboard button.

Use Sort Criteria to sort the displayed list of dams.



Access this selection from the **Root Window** by *Clicking* on **ReferenceData,** then on **Dam Catalog** (use the Sort/Filter Criteria to display a list of dam(s))**.**

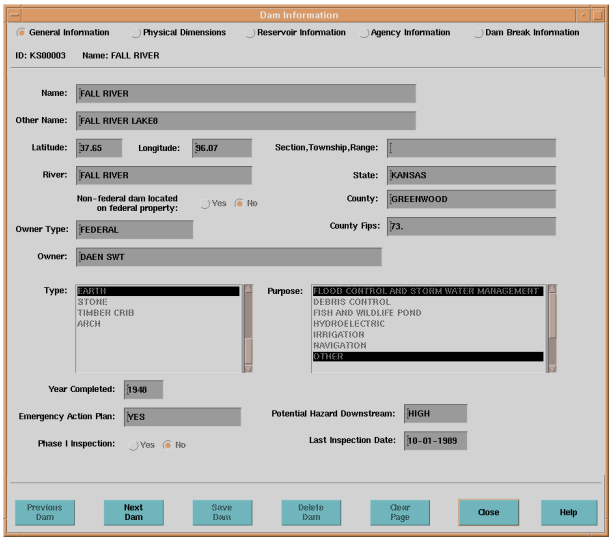
Notes:

Examples of data and information provided for each selected dam are shown on the following pages.

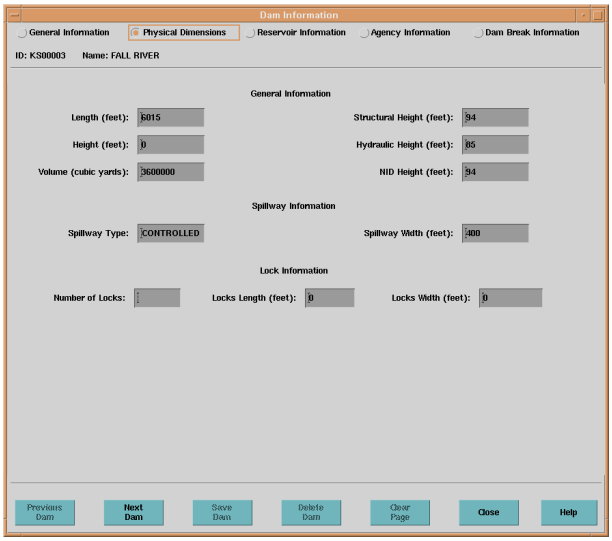
A list of **Dam Catalog Field Definitions** (used in this window and in dam information windows on the following page) is provided in Appendix C.

Buttons that are grayed-out are only active in HydroBase.

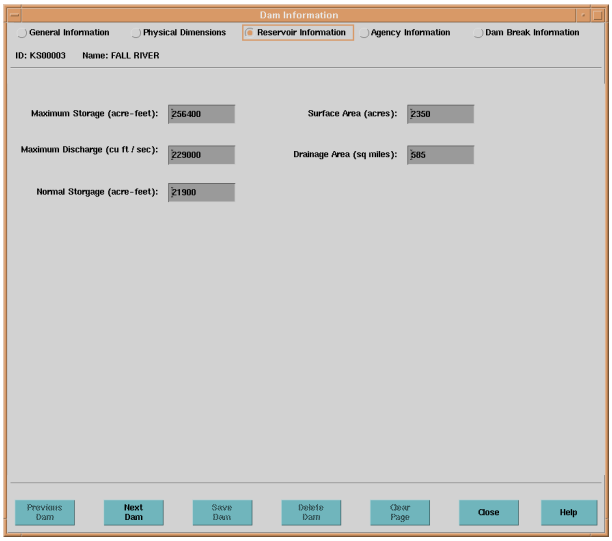
Dam Catalog Window (Information Examples) - Displayed below are examples of data and information available through Dam Catalog.



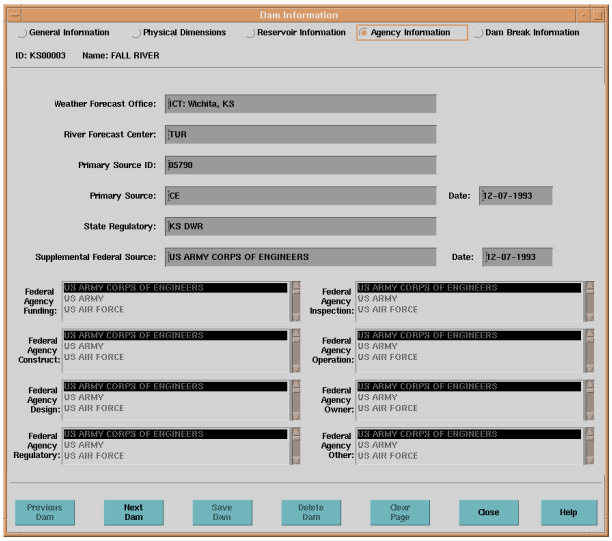
General Information



Physical Dimensions



Reservoir Information



Agency Information

Access these selections from the **Root Window** by *Clicking* on **ReferenceData,** then on **Dam Catalog,** select the dam(s) of interest (see previous page) and *Click* on **View.**

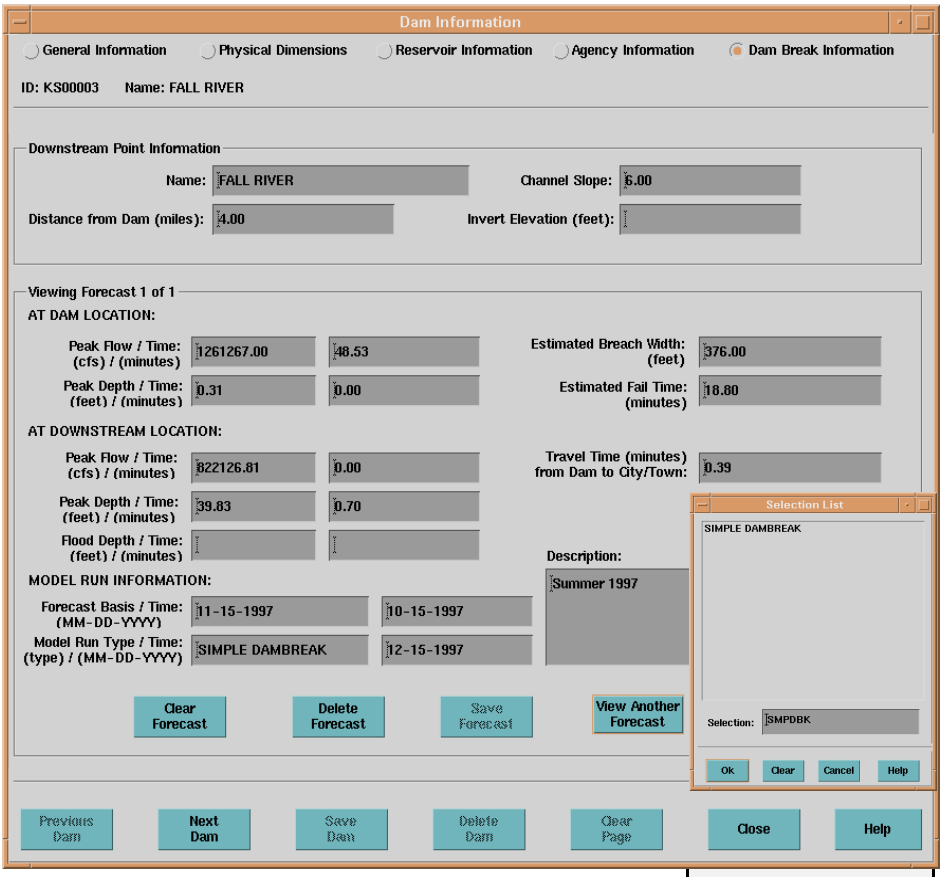
Notes: **T**he General Information screen will always be displayed first, for other selections, *Click* appropriate button across the top of the screen.
Buttons that are grayed-out are only active in HydroBase.

Dam Catalog Window (Dam Break Information Example) - Displayed below is an example of dam break forecast data and information available through Dam Catalog

Downstream information

Dam break forecast information, based on model output.

Click on View Another Forecast to see model output results from different model runs or different models, if available. When *Clicking* on View Another Forecast, the dialogue box shown at the right will appear and other model options can be selected.



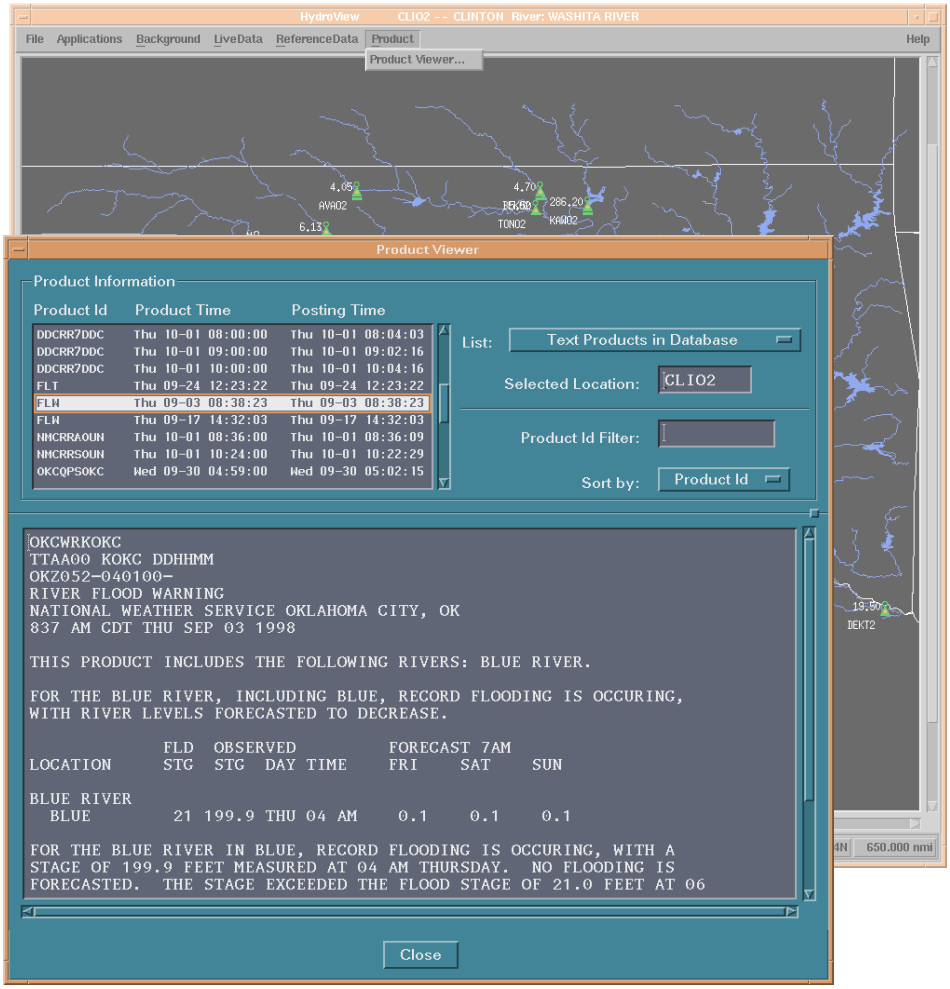
Dam break forecast selection dialogue box (above)

Access this selection from the **Root Window** by *Clicking* on **ReferenceData,** then on **Dam Catalog,** select the dam(s) of interest (see previous pages) and *Click* on **View,** then on **Dam Break Information.**

Notes: **S**imple Dambreak is set as the default model for dam break forecasts.
Buttons that are grayed-out are only active in HydroBase.

Product Viewer Window - Use this selection to display various current and past issued products in the database (e.g., river statement, flood warning, RR1).

Click to select the product to display below (based on the product type selected in **List:**. Default is Products for Selected Location

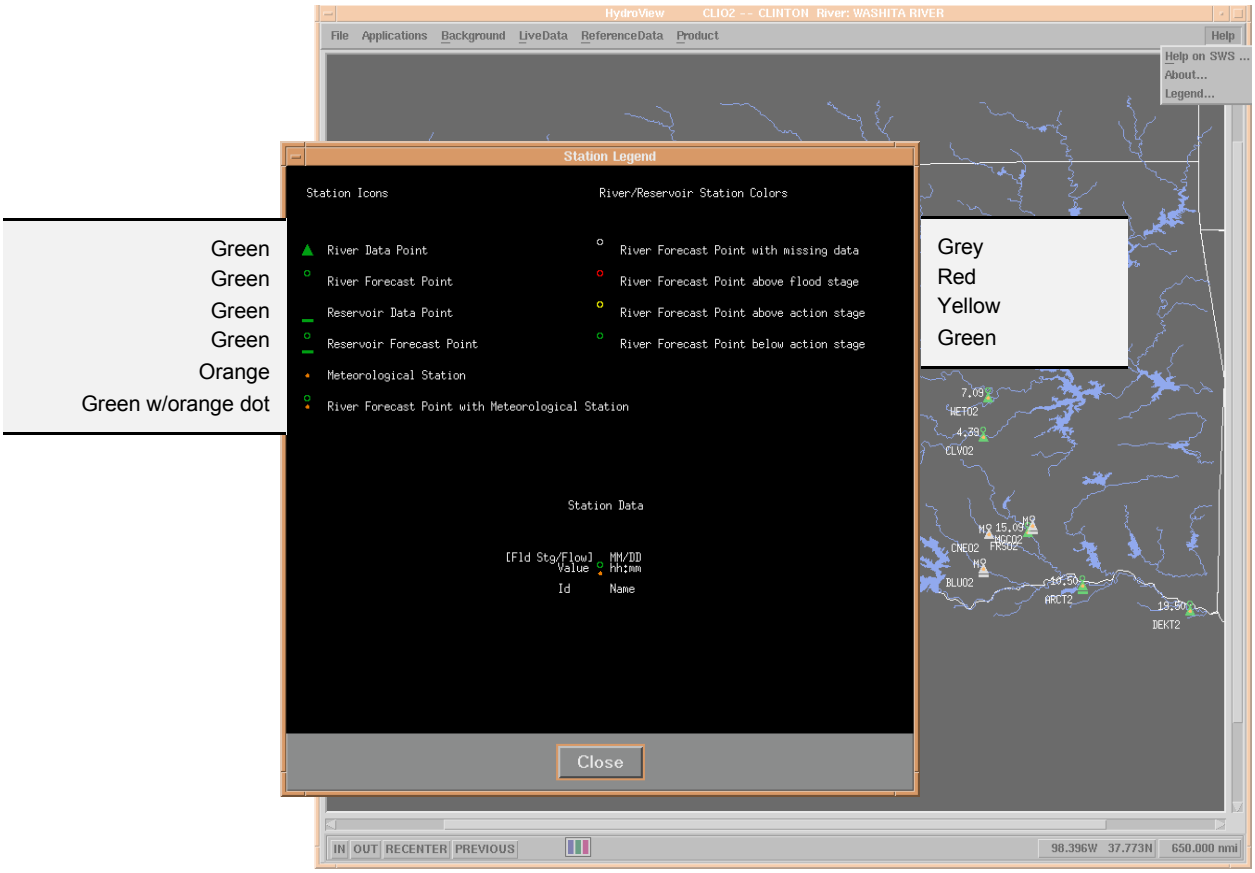


Access this selection from the **Root Window** by *Clicking* on **Product**, then on **Product Viewer.**

Notes:

This display is read-only, changes to data or information cannot be made.
Products can be sorted by ID, product time, or posting time.
Use of the Product Viewer requires the shef_storetext token to be set to ON in the /awips/hydroapps/.Apps_defaults_site file.
The number of versions of a specific product to be retained is defined in the HydroBase Data Ingest/Purge Parameters menu option. A product with 0 versions retained will not be able to be displayed in the Product Viewer.
Product Id Filter can be used to filter the Product Information list - type in the Product ID to sort by exactly (e.g., RVS, OKCRR1OKC) then *Click* on Product ID in the **Sort by:** box.
Select station in **Geographic Display** or through **Station Selection Window.**

Station Legend Window - Use this window to decipher station icons displayed in the Geographic Display.



Access this selection from the **Root Window** by *Clicking* on **Help**, then on **Legend**.

Notes: **I**cons are color coded as noted above**.**
This screen is for informational purposes only.

The HydroView Operations Guide provided below is designed to provide the user with a quick reference summary of the primary features of HydroView and how to access them. The Guide is subdivided into sections specifically pertaining to the Geographic Display, those operations pertaining to a particular station and those operations pertaining to all stations. The RiverPro Functional Guide, which follows the Operations Guide, provides more detail on the procedures to perform various functions in RiverPro.

HydroView Operations Guide

Operation	Window to Use	Getting to the Window
For the Geographic Display		
Manage the Geographic Display (Point Data Icons) **•Station type displayed** **•Information displayed** **•Data displayed** **•Time periods displayed**	Point Display Control Window	Start - **Root Window** Select - **LiveData** (Menu Bar) Click - **Map Display Control** Click - **Page: Point Data** Click - Selections of choice
Manage the Geographic Display (Areal Data) **•Mean Areal Precipitation**	Areal Display Control Window	Start - **Root Window** Select - **LiveData** (Menu Bar) Click - **Map Display Control** Click - **Page: Areal Data** Click - MAP of choice Click - Product of choice
Manage the Geographic Display (Areal Data) **•Flash Flood Guidance**	Areal Display Control Window	Start - **Root Window** Select - **LiveData** (Menu Bar) Click - **Map Display Control** Click - **Page: Areal Data** Click - FFG of choice Click - Product of choice

HydroView Operations Guide

Operation	Window to Use	Getting to the Window
Manage the Geographic Display (Areal Data) **•Stage I and II Data**	Areal Display Control Window	Start - **Root Window** Select - **LiveData** (Menu Bar) Click - **Map Display Control** Click - **Page: Areal Data** Click - Stage of choice Click - Product of choice
Manage Geographic Display (Background)	Root Window	Start - **Root Window** Select - **Background** (Menu Bar) Click - Background of choice
Decipher Station Icon Coding	Station Legend	Start - **Root Window** Select - **Help** (Menu Bar) Click - **Legend**
Load Latest Available Data (within the last 15 minutes)	Root Window	Start - **Root Window** Select- **LiveData** (Menu Bar) Click - **Refresh Data**
To Select a Station		
Select Station	Station Selection Window	Start - **Root Window** Select - **Background** (Menu Bar) Select - **Station Selection** Click - Station of choice

HydroView Operations Guide

Operation	Window to Use	Getting to the Window
Select Station (Alternate Approach)	Root Window	Start - **Root Window** (Graphical Display) Click - Station icon (Single click only, directly on icon)
Select a Station Before Performing the Following		
Review Current and Past Time Series for Observed and Forecast Data for Selected Station	Time Series Control Window	Start - **Root Window** Select - **LiveData** (Menu Bar) Select -**Time Series Control** Click **Graph** or **Table**
Review Current and Past Time Series for Observed and Forecast Data for Selected Station (Alternate Approach)	Root Window	Click - Station icon (Double click, directly on icon) Click - **Graph** or **Table**
Review and Edit Current and Past Observations in Tabular Form for Selected Station (Including Deletion and Insertion of Observations)	Tabular Time Series Display Window	Start - **Root Window** Select - **LiveData** (Menu Bar) Select - **Time Series Control** Click - **Table**
Review Geophysical Information and Current Stage Data (Selected Station and Other Stations Along the Reach)	Station Profile Window	Start - **Root Window** Select - **LiveData** (Menu Bar) Select - **Station Profile**

HydroView Operations Guide

Operation	Window to Use	Getting to the Window
Review Questionable and Bad Data Detected During the Quality Control Process	Questionable and Bad Data Window	Start - **Root Window** Select - **LiveData** (Menu Bar) Select - **Questionable and Bad Data** Click - **Filter By: Location** (View by station and/or by data parameter)
Review and Save or Delete Manually or Automatically Rejected Observations	Rejected Data Trash Can Window	Start - **Root Window** Select - **LiveData** (Menu Bar) Select - **Rejected Data Trash Can** Click - **Filter By: Location**
Review Background Gage Information (e.g., geophysical, record stages, flood stage)	Staff Gage Window	Start - **Root Window** Select - **ReferenceData** (Menu Bar) Select - **Staff Gage**
Review Default Impact Statements for Various Stages	Impact Statement Window	Start - **Root Window** Select - **ReferenceData** (Menu Bar) Select - **Impact Statement**
Review Existing Rating Curve	Rating Curve Window	Start - **Root Window** Select - **ReferenceData** (Menu Bar) Select - **Rating Curve**

HydroView Operations Guide

Operation	Window to Use	Getting to the Window
Review Background Information on Data Sources **•Observers** **•DCPs** **•Telemetry**	Data Sources Window	Start - **Root Window** Select - **ReferenceData** (Menu Bar) Select - **Data Sources** Select - **Type**
Review Background Information for Contacts (e.g., telephone numbers, concerns)	Contacts Window	Start - **Root Window** Select - **ReferenceData** (Menu Bar) Select - **Contacts**
Review Various Current and Past Issued Products in the Database (e.g., river statements, flood warnings, RR1)	Product Viewer Window	Start - **Root Window** Select - **Product** (Menu Bar) Select - **Product Viewer**
Review Information and Data for Any Available Historical Crest	Crest History Window	Start - **Root Window** Select - **ReferenceData** (Menu Bar) Select - **Crest History**
For All Stations		
Review Reporting Status for All Stations	Station Reporting Status/Latest Observations Window	Start - **Root Window** Select - **LiveData** (Menu Bar) Select - **Station Reporting Status/Latest Observations**

HydroView Operations Guide

Operation	Window to Use	Getting to the Window
Review Data that have Exceeded Alert and Alarm Thresholds	Alert and Alarm Data Window	Start - **Root Window** Select - **LiveData** (Menu Bar) Select - **Alert and Alarm Data**
Review all Questionable and Bad Data Detected During the Quality Control Process	Questionable and Bad Data Window	Start - **Root Window** Select - **LiveData** (Menu Bar) Select - **Questionable and Bad Data** (Sort by Location or Time)
Review and Save or Delete Manually or Automatically Rejected Observations	Rejected Data Trash Can Window	Start - **Root Window** Select - **LiveData** (Menu Bar) Select - **Rejected Data Trash Can** Click - **Filter By: Physical Element**
Display Up-to-the-Minute Precipitation Accumulation Information for a Selected Point	Point Precipitation Accumulations Window	Start - **Root Window** Select - **LiveData** (Menu Bar) Select - **Point Precipitation Accumulations** Select - desired point(s) and other parameters Click - **Load Data**

HydroView Operations Guide

Operation	Window to Use	Getting to the Window
For the HydroView System		
To Exit from HydroView	Root Window	Start - **Root Window** Select - **File** Select - **Exit**

The following HydroView Functional Guide provides examples of various functions which can be performed in HydroView. This guide can be used as an application tool to exercise some of the more pertinent HydroView capabilities. For some HydroView functions there are alternative approaches to view data and information over what is presented in the Functional Guide. The application of these alternatives is at the discretion of the user.

HydroView Functional Guide

Function	Window to Use	Procedure
Display Basin Boundaries	Root Window (Geographic Display)	Start - **Root Window** Select - **Background** (Menu Bar) Select - **Basins** Basins will be shown on Geographic Display. Other overlays can also be displayed using this same procedures.
Display Radar Umbrella(s)	Root Window (Geographic Display)	Start - **Root Window** Select - **Background** (Menu Bar) Select - **Radars** Radar umbrellas will be shown on Geographic Display.

HydroView Functional Guide

Function	Window to Use	Procedure
Display Precipitation Accumulation for the Past 24 Hours at all Stations Collecting Precipitation Data (Note - due to the large number of precipitation stations, it may be easier to read the display if the station name and ID are suppressed and the zoom-in feature is used.)	Point Display Control Window	Start - **Root Window** Select - **LiveData** (Menu Bar) Select - **Map Display Control** Click - **Page: Point Data** Click - **Precip** (Station Icons and Data) under ***Point Data Filter*** Click - **Suppress: Zeroes and Missing** under ***Precip:*** Click - **Set Time Period** under ***Precip:*** Click - **Set Time** Click - **24** Click - **OK** (Return to Root Window) Click anywhere on the display to activate request; data will be displayed with icons.
Determine Which Stations Report Precipitation	Root Window (Geographic Display)	Start - **Root Window** Select - **LiveData** (Menu Bar) Select - **Map Display Control** Click - **Page: Point Data** Click - **Precip** (Station Icons Only) under ***Point Data Filter*** Click - **Name** under ***Point Data Options*** (optional) Click anywhere on display to activate request. (Note: Need not suppress zeroes or missing under ***Precip:***)

HydroView Functional Guide

Function	Window to Use	Procedure
Review Precipitation Accumulation at a Station in Graphical Form	Time Series Control Window Graphical Time Series Display Window	Start - **Root Window** Select - **LiveData** (Menu Bar) Select - **Time Series Control** Select a Station (Must be a station that reports precipitation) Click - Station of Choice (Alternatively select station by single clicking on station of choice in Geographic Display) Select appropriate Physical Element/ TypeSource Codes Select - **Graph** Precipitation Accumulator is a default display.
Review Action and Flood Stages at a Station	Staff Gage Window	Start - **Root Window** Select - **Background** Select - **Station Selection** Click - Station of Choice Click - **Cancel** (Return to Root Window) (Alternatively select station by single clicking on station of choice in Geographic Display) Select - **ReferenceData** (Menu Bar) Select - **Staff Gage** Information will be displayed in the window.

HydroView Functional Guide

Function	Window to Use	Procedure
Determine Flood Impacts for Certain Stages at a Station	Impact Statement Window	Start - **Root Window** Select - **Background** Select - **Station Selection** Click - Station of Choice Click - **Cancel** (Return to Root Window) (Alternatively select station by single clicking on station of choice in Geographic Display) Select - **ReferenceData** (Menu Bar) Select - **Impact Statement** Click - Stage of Choice Impact statement will be displayed in the window.
Determine Record Flood Levels at a Station	Staff Gage Window	Start - **Root Window** Select - **Background** Select - **Station Selection** Click - Station of Choice Click - **Cancel** (Return to Root Window) (Alternatively select station by single clicking on station of choice in Geographic Display) Select - **ReferenceData** (Menu Bar) Select - **Staff Gage** Information will be displayed in the window.

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Function	Window to Use	Procedure
Enter a New Observation for a Station	Time Series Control Window Tabular Time Series Display Window	Start - **Root Window** Select - **LiveData** Select - **Time Series Control** Select a station (Alternatively select station by single clicking on station of choice in Geographic Display) Click - **Table** Select data type to modify Enter new data Click - **Update/Insert** (incorporates change and keeps window active) Value entered permanently into data base until deleted.

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Delete an Erroneous River Stage Observation for a Station	Time Series Control Window Tabular Time Series Display Window	Start - **Root Window** Select - **LiveData** Select - **Time Series Control** Select a station (Alternatively select station by single clicking on station of choice in Geographic Display) Click - **Table** Select data type to modify. Highlight data to delete Click - **Delete selected** (incorporates change and keeps window active) Value deleted permanently from data base unless re-entered.
Determine the Appropriate Contact(s) for a Station	Contacts Window	Start - **Root Window** Select - **Background** Select - **Station Selection** Click - Station of Choice Click - **Cancel** (Return to Root Window) (Alternatively select station by single clicking on station of choice in Geographic Display) Select - **ReferenceData** (Menu Bar) Select - **Contacts** Contacts, along with telephone numbers, will be displayed listed in order of importance.

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Retrieve the physical dimensions of a dam in the WFO service area	Dam Catalog Window	Start - **Root Window** Select - **Reference Data** (Menu Bar) Select - **Dam Catalog** Use the Search/Filter Criteria to select the dam(s) to view (the list of dam(s) matching the criteria will then be displayed). Click - on the dam(s) of interest from the displayed list A screen displaying General Information for the first dam selected will be displayed If this is the dam of interest, Click on Physical Dimensions at the top of the screen, the information will be displayed If this is not the dam of interest, Click on Next Dam button at the bottom of the screen until the appropriate dam is displayed

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Function	Window to Use	Procedure
Review Past Products Issued for a Station	Product Viewer Window	Start - **Root Window** Select - **Background** Select - **Station Selection** Click - Station of Choice Click - **Cancel** (Return to Root Window) (Alternatively select station by single clicking on station of choice in Geographic Display) Select - **Product** (Menu Bar) Select - **Product Viewer** Click - **List: Products for Selected Station** Click - Product of choice to review in **Product Information Window** (Products can be sorted or filtered by ID)